A 27-year-old man is brought to the emergency department by his wife. She says that he has been "acting crazy" for the last 2 weeks. He has hardly slept for the past 7 days and instead has worked on miscellaneous projects around the house. The patient spent several thousand dollars on new power tools to accomplish these tasks. When questioned, his speech is rapid and frenzied. He feels "spectacular" and is creating an "architectural masterpiece." The patient has had 2 previous depressive episodes. Which of the following medications is the most appropriate agent for long-term management of this patient?

- A. Bupropion
- B. Chlorpromazine
- C. Haloperidol
- D. Lorazepam
- E. Paroxetine
- F. Valproate

Submit

A 27-year-old man is brought to the emergency department by his wife. She says that he has been "acting crazy" for the last 2 weeks. He has hardly slept for the past 7 days and instead has worked on miscellaneous projects around the house. The patient spent several thousand dollars on new power tools to accomplish these tasks. When questioned, his speech is rapid and frenzied. He feels "spectacular" and is creating an "architectural masterpiece." The patient has had 2 previous depressive episodes. Which of the following medications is the most appropriate agent for long-term management of this patient?

- A. Bupropion (3%)
- B. Chlorpromazine (7%)
- C. Haloperidol (8%)
- D. Lorazepam (2%)
- E. Paroxetine (7%)
- ✓ F. Valproate (71%)

Omitted
Correct answer
F

71%
Answered correctly

03 secs
Time Spent

01/29/2020
Last Updated

Explanation

Mood stabilizers in bipolar disorder		
	Indications	Adverse effects

Mood stabilizers in bipolar disorder		
	Indications	**Adverse effects**
Lithium	• Manic & depressive features	• Diabetes insipidus • Hypothyroidism • Tremor • Ebstein anomaly (teratogenic)
Valproate	• Manic features	• Hepatotoxicity • Neural tube defects (teratogenic)
Carbamazepine	• Manic features	• Aplastic anemia • SIADH • Neural tube defects (teratogenic)
Lamotrigine	• Depressive features	• Benign rash • Stevens-Johnson syndrome

SIADH = syndrome of inappropriate antidiuretic hormone secretion.

This patient's euphoric mood, decreased need for sleep, hyperactivity, grandiosity, and pressured speech lasting more than a week are characteristic of an acute manic episode of **bipolar disorder**. Bipolar disorder is a highly recurrent illness requiring **maintenance treatment** with **mood-stabilizing medications** to decrease the risk of recurrent mood episodes. Preferred medications for bipolar maintenance treatment include lithium, the anticonvulsants **valproate** and lamotrigine, and the second-generation antipsychotic quetiapine.

(Choices A and E) Bupropion, a norepinephrine dopamine reuptake inhibitor, and paroxetine, a selective serotonin reuptake inhibitor, are antidepressants that have the potential to precipitate manic episodes. Antidepressant monotherapy should be avoided in bipolar maintenance treatment due to the risk of mood destabilization.

(Choices B and C) Chlorpromazine and haloperidol are first-generation antipsychotics (FGAs) used in the treatment of schizophrenia. FGAs may be used in combination with lithium or valproate for treatment of severe mania, but are not used as monotherapy for maintenance treatment

Lamotrigine	• Depressive features	• Stevens-Johnson syndrome

SIADH = syndrome of inappropriate antidiuretic hormone secretion.

This patient's euphoric mood, decreased need for sleep, hyperactivity, grandiosity, and pressured speech lasting more than a week are characteristic of an acute manic episode of **bipolar disorder**. Bipolar disorder is a highly recurrent illness requiring **maintenance treatment** with **mood-stabilizing medications** to decrease the risk of recurrent mood episodes. Preferred medications for bipolar maintenance treatment include lithium, the anticonvulsants **valproate** and lamotrigine, and the second-generation antipsychotic quetiapine.

(Choices A and E) Bupropion, a norepinephrine dopamine reuptake inhibitor, and paroxetine, a selective serotonin reuptake inhibitor, are antidepressants that have the potential to precipitate manic episodes. Antidepressant monotherapy should be avoided in bipolar maintenance treatment due to the risk of mood destabilization.

(Choices B and C) Chlorpromazine and haloperidol are first-generation antipsychotics (FGAs) used in the treatment of schizophrenia. FGAs may be used in combination with lithium or valproate for treatment of severe mania, but are not used as monotherapy for maintenance treatment of bipolar disorder.

(Choice D) Lorazepam is a benzodiazepine that can be used as an adjunct to mood stabilizers in the treatment of acute mania; it is not recommended for maintenance treatment.

Educational objective:
The anticonvulsant valproate has mood-stabilizing properties and is an effective maintenance treatment for bipolar disorder. Other maintenance options for bipolar disorder include lithium, lamotrigine, and quetiapine.

References

- Effectiveness of psychotropic medications in the maintenance phase of bipolar disorder: a meta-analysis of randomized controlled trials.

Behavioral science	Psychiatric/Behavioral & Substance Abuse	Bipolar disorder
Subject	System	Topic

Copyright © UWorld. All rights reserved.

A 40-year-old woman comes to the emergency department fearing she is having a heart attack. While clutching her chest and breathing heavily, she says, "I feel like I'm dying." Temperature is 37.2 C (99 F), blood pressure is 125/86 mm Hg, pulse is 110/min and regular, and respirations are 18/min. The patient's pulse oximetry shows 98% on room air. Laboratory evaluation and ECG show no abnormalities. The pain resolves within 10 minutes without treatment, and the patient reports, "I was taking the bus home from work when my chest started feeling really tight. I'm lucky my friend was there and able to help me get to the hospital. What if she's not there next time?" She describes experiencing similar episodes at random places and times that are characterized by a pounding heart, trembling, dizziness, and sweating. She drinks alcohol socially and does not use any medications. This patient is most likely to develop which of the following disorders as a result of her current condition?

A. Acute stress disorder
B. Agoraphobia
C. Brief psychotic disorder
D. Dependent personality disorder
E. Generalized anxiety disorder
F. Separation anxiety disorder

Submit

A 40-year-old woman comes to the emergency department fearing she is having a heart attack. While clutching her chest and breathing heavily, she says, "I feel like I'm dying." Temperature is 37.2 C (99 F), blood pressure is 125/86 mm Hg, pulse is 110/min and regular, and respirations are 18/min. The patient's pulse oximetry shows 98% on room air. Laboratory evaluation and ECG show no abnormalities. The pain resolves within 10 minutes without treatment, and the patient reports, "I was taking the bus home from work when my chest started feeling really tight. I'm lucky my friend was there and able to help me get to the hospital. What if she's not there next time?" She describes experiencing similar episodes at random places and times that are characterized by a pounding heart, trembling, dizziness, and sweating. She drinks alcohol socially and does not use any medications. This patient is most likely to develop which of the following disorders as a result of her current condition?

- A. Acute stress disorder (7%)
- ✓ B. Agoraphobia (43%)
- C. Brief psychotic disorder (0%)
- D. Dependent personality disorder (7%)
- E. Generalized anxiety disorder (37%)
- F. Separation anxiety disorder (3%)

Omitted
Correct answer
B

43%
Answered correctly

02 secs
Time Spent

06/17/2020
Last Updated

Explanation

Panic disorder

Explanation

Panic disorder	
Clinical features	• Recurrent & unexpected panic attacks with ≥4 of the following: ◦ Chest pain, palpitations, shortness of breath, choking ◦ Trembling, sweating, nausea, chills ◦ Dizziness, paresthesias ◦ Derealization, depersonalization ◦ Fear of losing control or of dying • Worry about additional attacks, avoidance behavior
Treatment	• First-line/maintenance: SSRI/SNRI &/or cognitive-behavioral therapy • Acute distress: benzodiazepines

SNRI = serotonin-norepinephrine reuptake inhibitor; **SSRI** = selective serotonin reuptake inhibitor.

This patient likely has **panic disorder**, which presents with distressing cardiopulmonary/neurologic symptoms that reach their peak level of intensity in 10 minutes or less and then subside. Due to the intensity of the symptoms and their tendency to mimic a heart attack, patients may fear they are dying and seek treatment in the emergency department.

Patients with panic disorder often develop **agoraphobia**, which is characterized by anxiety about and **avoidance of multiple situations** where they may **feel trapped and helpless** in the event of a panic attack (eg, crowds, enclosed spaces, public transportation). For example, this patient may start avoiding bus rides due to fears of recurrent panic attacks. In severe cases of agoraphobia, patients may restrict their activities to the point that they leave home only with a companion or they become completely housebound.

Agoraphobia is a distinct condition and can be diagnosed with or without the presence of panic disorder.

(Choice A) In acute stress disorder, exposure to a life-threatening trauma results in symptoms of reexperiencing (ie, intrusive memories, flashbacks), avoidance of reminders, negative mood, dissociation, and hyperarousal. This patient does not have a history of experiencing a traumatic event.

SNRI = serotonin-norepinephrine reuptake inhibitor; SSRI = selective serotonin reuptake inhibitor.

This patient likely has **panic disorder**, which presents with distressing cardiopulmonary/neurologic symptoms that reach their peak level of intensity in 10 minutes or less and then subside. Due to the intensity of the symptoms and their tendency to mimic a heart attack, patients may fear they are dying and seek treatment in the emergency department.

Patients with panic disorder often develop **agoraphobia**, which is characterized by anxiety about and **avoidance of multiple situations** where they may **feel trapped and helpless** in the event of a panic attack (eg, crowds, enclosed spaces, public transportation). For example, this patient may start avoiding bus rides due to fears of recurrent panic attacks. In severe cases of agoraphobia, patients may restrict their activities to the point that they leave home only with a companion or they become completely housebound.

Agoraphobia is a distinct condition and can be diagnosed with or without the presence of panic disorder.

(Choice A) In acute stress disorder, exposure to a life-threatening trauma results in symptoms of reexperiencing (ie, intrusive memories, flashbacks), avoidance of reminders, negative mood, dissociation, and hyperarousal. This patient does not have a history of experiencing a traumatic event.

(Choice C) Although patients may have the fear of "going crazy" while experiencing a panic attack, they are not at greater risk of developing psychotic symptoms (eg, delusions, hallucinations, disorganized speech and/or behavior). Acute psychotic symptoms would be more indicative of brief psychotic disorder.

(Choices D and F) This patient is fearful of leaving home unaccompanied due to a concern about future panic attacks rendering her helpless. In dependent personality disorder, individuals have a lifelong pattern of seeking out relationships due to feeling helpless when alone. Separation anxiety disorder in adults consists of ≥6 months of excessive and distressing anxiety due to separation from a significant attachment figure (eg, spouse, child), unrelated to a fear of being debilitated by panic attack symptoms.

(Choice E) Generalized anxiety disorder is characterized by persistent and excessive worry about multiple issues (eg, work, health, finances). This patient's anxiety is focused on her panic symptoms and future attacks.

Educational objective:
Panic disorder consists of recurrent and unexpected panic attacks characterized by an abrupt surge of anxiety and distressing cardiopulmonary/neurologic symptoms. Agoraphobia, a common comorbid disorder, results in anxiety about and avoidance of situations where

Agoraphobia is a distinct condition and can be diagnosed with or without the presence of panic disorder.

(Choice A) In acute stress disorder, exposure to a life-threatening trauma results in symptoms of reexperiencing (ie, intrusive memories, flashbacks), avoidance of reminders, negative mood, dissociation, and hyperarousal. This patient does not have a history of experiencing a traumatic event.

(Choice C) Although patients may have the fear of "going crazy" while experiencing a panic attack, they are not at greater risk of developing psychotic symptoms (eg, delusions, hallucinations, disorganized speech and/or behavior). Acute psychotic symptoms would be more indicative of brief psychotic disorder.

(Choices D and F) This patient is fearful of leaving home unaccompanied due to a concern about future panic attacks rendering her helpless. In dependent personality disorder, individuals have a lifelong pattern of seeking out relationships due to feeling helpless when alone. Separation anxiety disorder in adults consists of ≥6 months of excessive and distressing anxiety due to separation from a significant attachment figure (eg, spouse, child), unrelated to a fear of being debilitated by panic attack symptoms.

(Choice E) Generalized anxiety disorder is characterized by persistent and excessive worry about multiple issues (eg, work, health, finances). This patient's anxiety is focused on her panic symptoms and future attacks.

Educational objective:
Panic disorder consists of recurrent and unexpected panic attacks characterized by an abrupt surge of anxiety and distressing cardiopulmonary/neurologic symptoms. Agoraphobia, a common comorbid disorder, results in anxiety about and avoidance of situations where patients may feel trapped and helpless in the event of a panic attack (eg, crowds, enclosed spaces, public transportation).

References

- Diagnosis and management of generalized anxiety disorder and panic disorder in adults.

Behavioral science	Psychiatric/Behavioral & Substance Abuse	Panic disorder
Subject	System	Topic

Copyright © UWorld. All rights reserved.

A 31-year-old man is brought to the emergency department by the police after he assaulted a stranger who he thought was following him. The police report indicates that when the patient was arrested, he was shouting, "You don't understand, I'm the one who needs protection—the Russians are after my secrets!" In the emergency department, the patient is diaphoretic and tremulous. He is very easily distracted and cannot give a clear history. Temperature is 37 C (98.6 F), blood pressure is 164/102 mm Hg, and pulse is 112/min with a normal rhythm. Extraocular movements are intact, and the pupils are dilated. His speech is loud, rapid, and difficult to interrupt. Which of the following is the most likely diagnosis?

A. Anticholinergic toxicity
B. Bipolar disorder, manic episode
C. Cocaine intoxication
D. Delusional disorder, persecutory type
E. Opioid withdrawal
F. Phencyclidine intoxication
G. Schizophreniform disorder

Submit

A 31-year-old man is brought to the emergency department by the police after he assaulted a stranger who he thought was following him. The police report indicates that when the patient was arrested, he was shouting, "You don't understand, I'm the one who needs protection—the Russians are after my secrets!" In the emergency department, the patient is diaphoretic and tremulous. He is very easily distracted and cannot give a clear history. Temperature is 37 C (98.6 F), blood pressure is 164/102 mm Hg, and pulse is 112/min with a normal rhythm. Extraocular movements are intact, and the pupils are dilated. His speech is loud, rapid, and difficult to interrupt. Which of the following is the most likely diagnosis?

- A. Anticholinergic toxicity (2%)
- B. Bipolar disorder, manic episode (4%)
- ✓ C. Cocaine intoxication (51%)
- D. Delusional disorder, persecutory type (7%)
- E. Opioid withdrawal (6%)
- F. Phencyclidine intoxication (23%)
- G. Schizophreniform disorder (2%)

Omitted
Correct answer
C

51%
Answered correctly

02 secs
Time Spent

01/27/2020
Last Updated

Explanation

This patient's **psychotic symptoms** (eg, delusions, paranoia), pressured speech, and signs of **sympathetic stimulation** (eg, diaphoresis,

This patient's **psychotic symptoms** (eg, delusions, paranoia), pressured speech, and signs of **sympathetic stimulation** (eg, diaphoresis, tremulousness, tachycardia, hypertension, mydriasis) are most consistent with **cocaine intoxication**. In high doses, cocaine and other stimulants (eg, methamphetamine) may cause **paranoid delusions** that are often indistinguishable from those found in primary psychotic disorders (eg, schizophrenia). Auditory, visual, or tactile hallucinations (eg, insects crawling under the skin) may also occur. Patients under the influence of stimulants frequently exhibit euphoria, hyperactivity, agitation, and grandiosity that may resemble an acute manic episode.

(Choice A) Anticholinergic toxicity may cause tachycardia, hypertension, mydriasis, and psychosis. However, anticholinergic toxicity is characterized by both dry skin and mucous membranes rather than diaphoresis and presents with other classic anticholinergic effects (eg, urinary retention, decreased bowel sounds, hyperthermia).

(Choice B) Dilated pupils, diaphoresis, and tremors are not expected in a primary manic episode of bipolar disorder. A diagnosis of bipolar disorder cannot be made if there is evidence that symptoms can be attributed to the physiological effects of a substance (eg, cocaine).

(Choices D and G) Delusional disorder is characterized by ≥1 delusions lasting for ≥1 month that are not accompanied by other psychotic symptoms. Schizophreniform disorder may be diagnosed in patients who meet symptomatic criteria for schizophrenia for >1 month and <6 months. Neither diagnosis explains this patient's physical findings.

(Choice E) Opioid withdrawal presents with gastrointestinal distress (eg, nausea, diarrhea, abdominal cramping), myalgias, mydriasis, piloerection, and lacrimation. Psychotic features are not seen.

(Choice F) Phencyclidine (ie, PCP) intoxication may cause psychotic symptoms and violent behavior. It typically presents with prominent nystagmus, a finding notably absent in this patient.

Educational objective:
Cocaine intoxication can produce psychotic symptoms (eg, paranoid delusions), euphoria, and agitation. Physical signs indicating sympathetic stimulation (eg, tachycardia, diaphoresis, mydriasis) can assist in differentiating cocaine intoxication from primary psychiatric disorders.

References

- An international perspective and review of cocaine-induced psychosis: a call to action.
- Cocaine-induced psychotic disorders: presentation, mechanism, and management.
- Cocaine-induced psychotic symptoms in clinical setting

(Choice A) Anticholinergic toxicity may cause tachycardia, hypertension, mydriasis, and psychosis. However, anticholinergic toxicity is characterized by both dry skin and mucous membranes rather than diaphoresis and presents with other classic anticholinergic effects (eg, urinary retention, decreased bowe

(Choice B) Dilated pupils
disorder cannot be made i

(Choices D and G) Delus
symptoms. Schizophrenif
months. Neither diagnosis

(Choice E) Opioid withdr
piloerection, and lacrimati

(Choice F) Phencyclidine
nystagmus, a finding nota

Educational objective:
Cocaine intoxication can p
stimulation (eg, tachycard

References

- An international persp
- Cocaine-induced psyc
- Cocaine-induced psyc

Behavioral science
Subject

Exhibit Display

Schizophrenia	
Diagnosis	• ≥2 of the following (at least 1 symptom from 1-3) 1. Delusions 2. Hallucinations 3. Disorganized speech 4. Disorganized or catatonic behavior 5. Negative symptoms (eg, apathy, flat affect) • Continuous impairment ≥6 months • Significant functional decline
Treatment	• Antipsychotic medication • Adjunctive psychosocial interventions (eg, social skills training, cognitive-behavioral therapy, family intervention)

Add To New Card | Existing Card

Copyright © UWorld. All rights reserved.

A 72-year-old man comes to the office due to poor sleep. He is concerned that he is sleeping less since he retired a year ago. He says, "I used to sleep a solid 8 hours, but now I wake up several times a night. And I'm up for the day between 5:00 and 6:00 AM, which is a full hour before I want to get up. I'm probably only getting about 6 or 7 hours of sleep total." The patient typically falls asleep while watching television at 10:00 PM. He sometimes awakens to use the bathroom in the middle of the night but typically falls back asleep within 15 minutes. The patient likes to do crosswords and play golf in the mornings but occasionally takes 30-minute naps in the afternoon. The patient's wife says that he snores softly, but she has not witnessed any breathing pauses. Medical problems include hypertension and a history of depression. The patient does not use alcohol or illicit drugs. Which of the following is the most likely cause of this patient's symptoms?

A. Adjustment disorder
B. Age-related sleep changes
C. Insomnia disorder
D. Major depressive disorder
E. Obstructive sleep apnea
F. REM sleep behavior disorder

Submit

A 72-year-old man comes to the office due to poor sleep. He is concerned that he is sleeping less since he retired a year ago. He says, "I used to sleep a solid 8 hours, but now I wake up several times a night. And I'm up for the day between 5:00 and 6:00 AM, which is a full hour before I want to get up. I'm probably only getting about 6 or 7 hours of sleep total." The patient typically falls asleep while watching television at 10:00 PM. He sometimes awakens to use the bathroom in the middle of the night but typically falls back asleep within 15 minutes. The patient likes to do crosswords and play golf in the mornings but occasionally takes 30-minute naps in the afternoon. The patient's wife says that he snores softly, but she has not witnessed any breathing pauses. Medical problems include hypertension and a history of depression. The patient does not use alcohol or illicit drugs. Which of the following is the most likely cause of this patient's symptoms?

- A. Adjustment disorder (3%)
- ✓ B. Age-related sleep changes (90%)
- C. Insomnia disorder (1%)
- D. Major depressive disorder (1%)
- E. Obstructive sleep apnea (1%)
- F. REM sleep behavior disorder (2%)

Omitted
Correct answer
B

90%
Answered correctly

02 secs
Time Spent

02/14/2020
Last Updated

Explanation

This patient's sleep changes are consistent with **normal aging**. Age-related changes in sleep architecture include **decreased total sleep time** and slow-wave sleep with increased nighttime sleep latency. As a result of these changes, elderly patients may experience more **fragmented**

Explanation

This patient's sleep changes are consistent with **normal aging**. Age-related changes in sleep architecture include **decreased total sleep time** and slow-wave sleep with increased nighttime sleep latency. As a result of these changes, elderly patients may experience more **fragmented sleep** with nocturnal awakenings and an **earlier wake-up time** when compared to their previous sleep pattern. All these changes can in turn lead to subjective reports of insomnia and intentional and unintentional **daytime napping**.

This patient functions well during the daytime and does not exhibit any other symptoms that would be concerning for a sleep disorder (eg, sleep apnea). He should be reassured that these changes are normal.

(**Choice A**) Adjustment disorder should be considered in a patient who develops mood symptoms within 3 months of a stressor. If mood symptoms persist for >6 months after the stressor, then adjustment disorder cannot be diagnosed. This patient does not have any mood symptoms, and his retirement was >6 months ago.

(Choice C) Insomnia disorder involves persistent difficulties initiating or maintaining sleep, resulting in clinically significant distress or impairment. It would not be diagnosed in a patient with normal age-related sleep changes.

(Choice D) Although sleep changes are frequent in major depressive disorder, this patient lacks other key depressive symptoms necessary to meet criteria for it (eg, sadness, decreased interest, anhedonia, decreased appetite, suicidality).

(Choice E) Sleep apnea is associated with hypertension and fragmented sleep. However, this patient has no history of witnessed apneas and his sleep changes are classic for normal aging.

(Choice F) REM sleep behavior disorder is a parasomnia characterized by dream-enactment behaviors that occur due to loss of normal REM sleep atonia.

Educational objective:
Age-related sleep changes may be reported as insomnia and must be differentiated from primary sleep disorders and other disorders. Normal changes include decreased total sleep time, increased nighttime awakenings, sleepiness earlier in the evening with earlier morning awakening, and increased daytime napping.

References

- Sleep disorders in the elderly.

This patient's sleep changes are consistent with **normal aging**. Age-related changes in sleep architecture include **decreased total sleep time** and slow-wave sleep with increased nighttime sleep latency. As a result of these changes, elderly patients may experience more **fragmented sleep** with nocturnal awak ... ead to subjective reports of ins

This patient functions well ... p apnea). He should be rea

(**Choice A**) Adjustment d symptoms persist for >6 m symptoms, and his retirem

(**Choice C**) Insomnia disc ... ent. It would not be diagnosed

(**Choice D**) Although slee meet criteria for it (eg, sac

(**Choice E**) Sleep apnea ... d his sleep changes are classic

(**Choice F**) REM sleep be sleep atonia.

Educational objective:
Age-related sleep change changes include decrease and increased daytime na

References

- Sleep disorders in the
- Sleep disorders in the elderly: diagnosis and management.

Exhibit Display

Major depressive disorder	
Diagnosis	• ≥5 of the following symptoms lasting ≥2 weeks (at least 1 symptom must be either depressed mood or loss of interest/pleasure): ◦ Depressed mood ◦ Loss of interest or pleasure ◦ Change in appetite or weight ◦ Insomnia or hypersomnia ◦ Psychomotor retardation or agitation ◦ Low energy ◦ Poor concentration or indecisiveness ◦ Thoughts of worthlessness or inappropriate guilt ◦ Recurrent thoughts of death or suicide • No history of mania or hypomania • Not due to substances or another medical condition
Treatment	• Psychotherapy • Antidepressant medication

Add To New Card | Existing Card

A 67-year-old woman comes to the office due to difficulty concentrating. She reports repeatedly reading the same page of material due to an inability to focus. She also describes memory problems, stating that it "takes a while to remember another person's name." The patient's medical history is significant for hypertension and type 2 diabetes mellitus. These are well controlled through diet, exercise, and oral medications. She lives alone and describes her mood as "good." Blood pressure is 127/67 mm Hg and pulse is 65/min. The physician decides to administer a brief cognitive test to assess her difficulty in concentrating. Which of the following elements of cognitive testing would best assess for impaired attention and concentration in this patient?

A. Following a brief 3-step command

B. Recalling 3 unrelated words after 5 minutes

C. Reciting months of the year backwards

D. Remembering past events

E. Writing a complete sentence

Submit

A 67-year-old woman comes to the office due to difficulty concentrating. She reports repeatedly reading the same page of material due to an inability to focus. She also describes memory problems, stating that it "takes a while to remember another person's name." The patient's medical history is significant for hypertension and type 2 diabetes mellitus. These are well controlled through diet, exercise, and oral medications. She lives alone and describes her mood as "good." Blood pressure is 127/67 mm Hg and pulse is 65/min. The physician decides to administer a brief cognitive test to assess her difficulty in concentrating. Which of the following elements of cognitive testing would best assess for impaired attention and concentration in this patient?

- A. Following a brief 3-step command (22%)
- B. Recalling 3 unrelated words after 5 minutes (31%)
- ✓ C. Reciting months of the year backwards (43%)
- D. Remembering past events (0%)
- E. Writing a complete sentence (1%)

Omitted
Correct answer
C

43%
Answered correctly

02 secs
Time Spent

01/31/2020
Last Updated

Explanation

Cognitive testing & related domains	
Element	**Sample assessment metric**
Orientation	Providing name, location & current date

A 67-year-old woman comes to the office due to difficulty concentrating. She reports repeatedly reading the same page of material due to an inability to focus. She also describes memory problems, stating that it "takes a while to remember another person's name." The patient's medical history is significant for hypertension and type 2 diabetes mellitus. These are well controlled through diet, exercise, and oral medications. She lives alone and describes her mood as "good." Blood pressure is 127/67 mm Hg and pulse is 65/min. The physician decides to administer a brief cognitive test to assess her difficulty in concentrating. Which of the following elements of cognitive testing would best assess for impaired attention and concentration in this patient?

- A. Following a brief 3-step command (22%)
- B. Recalling 3 unrelated words after 5 minutes (31%)
- ✓ C. Reciting months of the year backwards (43%)
- D. Remembering past events (0%)
- E. Writing a complete sentence (1%)

Omitted
Correct answer
C

43%
Answered correctly

02 secs
Time Spent

01/31/2020
Last Updated

Explanation

Cognitive testing & related domains	
Element	**Sample assessment metric**
Orientation	Providing name, location & current date

Cognitive testing & related domains	
Element	**Sample assessment metric**
Orientation	Providing name, location & current date
Comprehension	Following multistep commands
Concentration	Reciting months of the year backwards
Short-term memory	Recalling 3 unrelated words after 5 minutes
Long-term memory	Providing details of significant life events
Language	Writing a complete sentence with noun-verb agreement
Visual-spatial	Drawing intersecting pentagons
Executive function	Drawing a clock oriented to the time requested

There are several quick clinical tests to **assess attention and concentration** in situations where they may be impaired (eg, dementia, delirium, head injury, depression). These include **counting down from 100** by intervals of 3 or 7, reciting the **months of the year in reverse order**, or spelling "**world**" **backwards**. Asking a patient to recite the months of the year backwards is often helpful if the patient has a low educational level or is hesitant to perform a task involving math or spelling.

Attention and concentration are tested in the Montreal Cognitive Assessment (MoCA), a widely used screening tool for cognitive impairment. The MoCA also measures time/place orientation, executive function, language, visual-spatial ability, and memory registration and recall. Results must be interpreted with consideration of the patient's education level and existing language, motor, and visual impairments. In order to make a diagnosis of **dementia**, the patient must demonstrate **impairment in ≥1 cognitive domains** (eg, memory, language, executive function) during testing as well as **functional impairment** in activities of daily living (eg, bathing, shopping, cooking).

(Choice A) Comprehension is tested by asking the patient to follow a multistep command. This usually involves relatively brief tasks such as

There are several quick clinical tests to **assess attention and concentration** in situations where they may be impaired (eg, dementia, delirium, head injury, depression). These include **counting down from 100** by intervals of 3 or 7, reciting the **months of the year in reverse order**, or spelling "**world**" **backwards**. Asking a patient to recite the months of the year backwards is often helpful if the patient has a low educational level or is hesitant to perform a task involving math or spelling.

Attention and concentration are tested in the Montreal Cognitive Assessment (MoCA), a widely used screening tool for cognitive impairment. The MoCA also measures time/place orientation, executive function, language, visual-spatial ability, and memory registration and recall. Results must be interpreted with consideration of the patient's education level and existing language, motor, and visual impairments. In order to make a diagnosis of **dementia**, the patient must demonstrate **impairment in ≥1 cognitive domains** (eg, memory, language, executive function) during testing as well as **functional impairment** in activities of daily living (eg, bathing, shopping, cooking).

(Choice A) Comprehension is tested by asking the patient to follow a multistep command. This usually involves relatively brief tasks such as taking a piece of paper from the examiner, folding it in half, and placing it on the floor. Due to the brevity of these actions, attention and concentration may not be tested effectively.

(Choice B) Memory registration and recall are assessed by asking the patient to repeat aloud the names of 3 unrelated objects and then asking him/her to recall them several minutes later. This would not test attention and concentration effectively, as these are better assessed by tasks requiring prolonged, continuous thinking.

(Choice D) Remote memory is tested by asking patients about the details of significant life events (eg, birth, graduation, marriage dates).

(Choice E) The writing domain of language can be tested by asking the patient to write a sentence containing at least one noun and verb. Oral fluency can be assessed by listening to the patient's spontaneous speech.

Educational objective:
Quick clinical tests to assess attention and concentration include counting down from 100 by intervals of 3 or 7, reciting the months of the year in reverse order, and spelling "world" backwards.

References

- Evaluating attention in delirium: a comparison of bedside tests of attention.

Attention and concentration are tested in the Montreal Cognitive Assessment (MoCA), a widely used screening tool for cognitive impairment. The MoCA also measures time/place orientation, executive function, language, visual-spatial ability, and memory registration and recall. Results must be interpreted with consideration of the patient's education level and existing language, motor, and visual impairments. In order to make a diagnosis of **dementia**, the patient must demonstrate **impairment in ≥1 cognitive domains** (eg, memory, language, executive function) during testing as well as **functional impairment** in activities of daily living (eg, bathing, shopping, cooking).

(Choice A) Comprehension is tested by asking the patient to follow a multistep command. This usually involves relatively brief tasks such as taking a piece of paper from the examiner, folding it in half, and placing it on the floor. Due to the brevity of these actions, attention and concentration may not be tested effectively.

(Choice B) Memory registration and recall are assessed by asking the patient to repeat aloud the names of 3 unrelated objects and then asking him/her to recall them several minutes later. This would not test attention and concentration effectively, as these are better assessed by tasks requiring prolonged, continuous thinking.

(Choice D) Remote memory is tested by asking patients about the details of significant life events (eg, birth, graduation, marriage dates).

(Choice E) The writing domain of language can be tested by asking the patient to write a sentence containing at least one noun and verb. Oral fluency can be assessed by listening to the patient's spontaneous speech.

Educational objective:
Quick clinical tests to assess attention and concentration include counting down from 100 by intervals of 3 or 7, reciting the months of the year in reverse order, and spelling "world" backwards.

References

- Evaluating attention in delirium: a comparison of bedside tests of attention.

Behavioral science	Psychiatric/Behavioral & Substance Abuse	Mental status examination
Subject	System	Topic

Copyright © UWorld. All rights reserved.

A 46-year-old woman comes to the office due to sexual difficulties for the past year. The patient rarely thinks about sex anymore and frequently declines sex when her husband tries to initiate. She is attracted to her husband and worries that he assumes she is losing interest in him. Although vaginal lubrication is adequate during sex and the patient can reach orgasm, she finds that her mind wanders during the experience. She is unsure what is causing a decrease in her sex drive, although she notes that she received a promotion 3 months ago and has been working longer hours since then. The patient describes her marriage as stable and loving. She has a history of a depressive episode and currently takes bupropion. Physical examination and laboratory studies, including thyroid function tests, show no abnormalities. Which of the following is the most likely diagnosis?

A. Adjustment disorder
B. Antidepressant-induced sexual dysfunction
C. Female orgasmic disorder
D. Female sexual interest/arousal disorder
E. Genito-pelvic pain/penetration disorder
F. Normal menopausal changes

Submit

A 46-year-old woman comes to the office due to sexual difficulties for the past year. The patient rarely thinks about sex anymore and frequently declines sex when her husband tries to initiate. She is attracted to her husband and worries that he assumes she is losing interest in him. Although vaginal lubrication is adequate during sex and the patient can reach orgasm, she finds that her mind wanders during the experience. She is unsure what is causing a decrease in her sex drive, although she notes that she received a promotion 3 months ago and has been working longer hours since then. The patient describes her marriage as stable and loving. She has a history of a depressive episode and currently takes bupropion. Physical examination and laboratory studies, including thyroid function tests, show no abnormalities. Which of the following is the most likely diagnosis?

A. Adjustment disorder (22%)
B. Antidepressant-induced sexual dysfunction (12%)
C. Female orgasmic disorder (1%)
✓ D. Female sexual interest/arousal disorder (49%)
E. Genito-pelvic pain/penetration disorder (0%)
F. Normal menopausal changes (14%)

Omitted
Correct answer
D

49%
Answered correctly

02 secs
Time Spent

07/02/2020
Last Updated

Explanation

This patient's lack of sexual desire is most consistent with **female sexual interest/arousal disorder**, a sexual disorder characterized by lack of, or significantly reduced, sexual interest and/or arousal. Diagnosis requires ruling out psychological, medical, and substance/medication-related

Explanation

This patient's lack of sexual desire is most consistent with **female sexual interest/arousal disorder**, a sexual disorder characterized by lack of, or significantly reduced, sexual interest and/or arousal. Diagnosis requires ruling out psychological, medical, and substance/medication-related causes of sexual dysfunction (eg, depression, diabetes, chronic alcohol or drug use) and relationship problems.

The diagnosis of female sexual interest/arousal disorder encompasses symptoms of **decreased interest, decreased arousal, or both**. This patient primarily experiences decreased interest (ie, lack of sexual thoughts; reduced initiation of sexual activity or receptivity to a partner's attempts to initiate, but adequate lubrication/orgasm). Symptoms related to arousal may include decreased excitement/pleasure in response to mental and physical sexual cues and encounters.

(Choice A) Although the patient mentions that her condition is worse since her promotion 3 months ago, there is evidence of a change in sexual functioning preceding this stressful event.

(Choice B) Serotonergic antidepressants (eg, selective serotonin reuptake inhibitors, serotonin-norepinephrine reuptake inhibitors) are a common cause of medication-induced sexual dysfunction and can cause decreased libido as well as anorgasmia in women. This patient, however, is taking bupropion, a norepinephrine-dopamine reuptake inhibitor that does not affect serotonin and is unlikely to cause sexual side effects.

(Choice C) Female orgasmic disorder is characterized by marked delay in, decreased frequency and intensity of, or absence of orgasms.

(Choice E) Genitopelvic pain/penetration disorder involves recurrent difficulties with pain or fear of pain with vaginal intercourse or penetration attempts.

(Choice F) Although declining levels of estrogen in peri- and post-menopausal women may be associated with decreased sexual interest in some patients, this is typically accompanied by decreased vaginal lubrication, which this woman does not describe.

Educational objective:
Female sexual interest/arousal disorder is characterized by lack of, or significantly reduced, sexual interest and/or arousal. Diagnosis requires ruling out psychological, medical, and substance/medication-related causes and relationship problems.

References

- Hypoactive sexual desire disorder: International Society for the Study of Women's Sexual Health (ISSWSH) Expert Consensus Panel Review.

The diagnosis of female sexual interest/arousal disorder encompasses symptoms of **decreased interest, decreased arousal, or both**. This patient primarily experiences decreased interest (ie, lack of sexual thoughts; reduced initiation of sexual activity or receptivity to a partner's attempts to initiate, but adequate lubrication/orgasm). Symptoms related to arousal may include decreased excitement/pleasure in response to mental and physical sexual cues and encounters.

(Choice A) Although the patient mentions that her condition is worse since her promotion 3 months ago, there is evidence of a change in sexual functioning preceding this stressful event.

(Choice B) Serotonergic antidepressants (eg, selective serotonin reuptake inhibitors, serotonin-norepinephrine reuptake inhibitors) are a common cause of medication-induced sexual dysfunction and can cause decreased libido as well as anorgasmia in women. This patient, however, is taking bupropion, a norepinephrine-dopamine reuptake inhibitor that does not affect serotonin and is unlikely to cause sexual side effects.

(Choice C) Female orgasmic disorder is characterized by marked delay in, decreased frequency and intensity of, or absence of orgasms.

(Choice E) Genitopelvic pain/penetration disorder involves recurrent difficulties with pain or fear of pain with vaginal intercourse or penetration attempts.

(Choice F) Although declining levels of estrogen in peri- and post-menopausal women may be associated with decreased sexual interest in some patients, this is typically accompanied by decreased vaginal lubrication, which this woman does not describe.

Educational objective:
Female sexual interest/arousal disorder is characterized by lack of, or significantly reduced, sexual interest and/or arousal. Diagnosis requires ruling out psychological, medical, and substance/medication-related causes and relationship problems.

References

- Hypoactive sexual desire disorder: International Society for the Study of Women's Sexual Health (ISSWSH) Expert Consensus Panel Review.

Behavioral science	Psychiatric/Behavioral & Substance Abuse	Female sexual dysfunction
Subject	System	Topic

Copyright © UWorld. All rights reserved.

A 36-year-old man is brought to the hospital after being found wandering the streets barefoot and shouting to himself. Although he takes antipsychotic medication daily, his parents are having difficulty managing him at home. The patient believes he is fighting a conspiracy and that his thoughts are directly controlled by a device that was implanted in his brain during a prior hospitalization. Previous trials of haloperidol, quetiapine, and risperidone resulted in minimal improvement. He has no other medical problems. On mental status examination, the patient is alert, and restless with poor grooming, disheveled clothing, and flat affect. He refuses to answer most questions, accuses his parents of being part of the conspiracy, and mumbles nonsensical words. Which of the following medications would be most effective for this patient's illness?

- A. Aripiprazole
- B. Chlorpromazine
- C. Clonazepam
- D. Clozapine
- E. Haloperidol long-acting injectable
- F. Valproate
- G. Ziprasidone

Submit

A 36-year-old man is brought to the hospital after being found wandering the streets barefoot and shouting to himself. Although he takes antipsychotic medication daily, his parents are having difficulty managing him at home. The patient believes he is fighting a conspiracy and that his thoughts are directly controlled by a device that was implanted in his brain during a prior hospitalization. Previous trials of haloperidol, quetiapine, and risperidone resulted in minimal improvement. He has no other medical problems. On mental status examination, the patient is alert, and restless with poor grooming, disheveled clothing, and flat affect. He refuses to answer most questions, accuses his parents of being part of the conspiracy, and mumbles nonsensical words. Which of the following medications would be most effective for this patient's illness?

- A. Aripiprazole (6%)
- B. Chlorpromazine (6%)
- C. Clonazepam (4%)
- ✓ D. Clozapine (65%)
- E. Haloperidol long-acting injectable (8%)
- F. Valproate (5%)
- G. Ziprasidone (2%)

Omitted
Correct answer
D

65%
Answered correctly

01 sec
Time Spent

02/18/2020
Last Updated

Explanation

Clozapine treatment guidelines

Explanation

Clozapine treatment guidelines	
Indications	• Treatment-resistant schizophrenia • Schizophrenia associated with suicidality
Adverse effects	• Agranulocytosis • Seizures • Myocarditis • Metabolic syndrome

This patient likely has schizophrenia, a chronic mental illness characterized by delusions, hallucinations, disorganized speech and behavior, and negative symptoms. Antipsychotic medication is the treatment of choice. This patient is considered treatment-resistant as he has had a poor response to at least 2 antipsychotics and continues to experience multiple delusions and disorganized speech and behavior. The second-generation antipsychotic **clozapine** is the only medication that has consistently shown **superior efficacy** in **treatment-resistant schizophrenia**. Clozapine has an affinity for multiple dopamine and serotonin receptors, but the precise pharmacological mechanism responsible for its superior efficacy is unknown.

Treatment with clozapine involves mandatory monitoring of the absolute neutrophil count due to the risk of neutropenia and life-threatening **agranulocytosis**. Although clozapine is associated with neutropenia, weight gain, and metabolic effects, the potential benefit of improving symptoms in treatment-resistant schizophrenia often outweighs these risks.

(Choices A and G) Aripiprazole and ziprasidone are second-generation antipsychotics used in schizophrenia. However this patient has already failed 2 trials with second-generation antipsychotics (risperidone and quetiapine). Due to its superior efficacy in treatment-resistant schizophrenia, clozapine would be the preferred agent.

(Choice B) Chlorpromazine is a low-potency, first-generation antipsychotic that is unlikely to be effective in treatment-resistant schizophrenia.

(Choice C) Clonazepam is a benzodiazepine that can be used adjunctively to target agitation in individuals with psychosis, but it does not specifically treat psychotic symptoms.

efficacy is unknown.

Treatment with clozapine involves mandatory monitoring of the absolute neutrophil count due to the risk of neutropenia and life-threatening **agranulocytosis**. Although clozapine is associated with neutropenia, weight gain, and metabolic effects, the potential benefit of improving symptoms in treatment-resistant schizophrenia often outweighs these risks.

(Choices A and G) Aripiprazole and ziprasidone are second-generation antipsychotics used in schizophrenia. However this patient has already failed 2 trials with second-generation antipsychotics (risperidone and quetiapine). Due to its superior efficacy in treatment-resistant schizophrenia, clozapine would be the preferred agent.

(Choice B) Chlorpromazine is a low-potency, first-generation antipsychotic that is unlikely to be effective in treatment-resistant schizophrenia.

(Choice C) Clonazepam is a benzodiazepine that can be used adjunctively to target agitation in individuals with psychosis, but it does not specifically treat psychotic symptoms.

(Choice E) Haloperidol long-acting injectable would be a good strategy for a patient who is nonadherent and has a history of responding well to oral haloperidol. However, this patient is adherent and has responded poorly to haloperidol.

(Choice F) Valproate is an anticonvulsant mood stabilizer used in the treatment of bipolar disorder.

Educational objective:
The antipsychotic clozapine is the drug of choice for treatment-resistant schizophrenia. Treatment requires monitoring of the absolute neutrophil count due to the risks of neutropenia and agranulocytosis.

References

- Clozapine: balancing safety with superior antipsychotic efficacy.
- Clozapine: a review of clinical practice guidelines and prescribing trends.

Behavioral science	Psychiatric/Behavioral & Substance Abuse	Schizophrenia
Subject	System	Topic

Copyright © UWorld. All rights reserved.

A 14-year-old girl is brought to the office by her mother due to unusual behavior over the past year. The mother is concerned that her daughter seems overly anxious about eating, and says, "During lunch, she spent 45 minutes cutting the broccoli on her plate until all the pieces were the same size." The patient recently became a vegetarian and spends hours in the grocery store selecting vegetables and checking nutritional information. She also seems very concerned about her appearance; she brushes her hair 21 times on each side, parts her hair strand by strand, and plucks her eyebrows for an hour daily. The patient says, "If I don't keep things exactly even I'm afraid something bad might happen." The patient is medically healthy and has not yet started menstruating. She weighs 45.8 kg (101 lb) and is 157.5 cm (5 ft 2 in) tall. BMI is 18.5 kg/m^2. Physical examination is normal with the exception of extremely sparse eyebrows. Which of the following is the most likely primary diagnosis?

A. Anorexia nervosa
B. Body dysmorphic disorder
C. Generalized anxiety disorder
D. Obsessive-compulsive disorder
E. Obsessive-compulsive personality disorder
F. Trichotillomania

Submit

A 14-year-old girl is brought to the office by her mother due to unusual behavior over the past year. The mother is concerned that her daughter seems overly anxious about eating, and says, "During lunch, she spent 45 minutes cutting the broccoli on her plate until all the pieces were the same size." The patient recently became a vegetarian and spends hours in the grocery store selecting vegetables and checking nutritional information. She also seems very concerned about her appearance; she brushes her hair 21 times on each side, parts her hair strand by strand, and plucks her eyebrows for an hour daily. The patient says, "If I don't keep things exactly even I'm afraid something bad might happen." The patient is medically healthy and has not yet started menstruating. She weighs 45.8 kg (101 lb) and is 157.5 cm (5 ft 2 in) tall. BMI is 18.5 kg/m^2. Physical examination is normal with the exception of extremely sparse eyebrows. Which of the following is the most likely primary diagnosis?

A. Anorexia nervosa (3%)
B. Body dysmorphic disorder (3%)
C. Generalized anxiety disorder (0%)
✓ D. Obsessive-compulsive disorder (70%)
E. Obsessive-compulsive personality disorder (22%)
F. Trichotillomania (0%)

Omitted
Correct answer
D

70%
Answered correctly

02 secs
Time Spent

03/20/2020
Last Updated

Explanation

Obsessive-compulsive disorder

Obsessive-compulsive disorder	

Clinical features	• **Obsessions**
	  ◦ Recurrent, intrusive, anxiety-provoking thoughts, urges, or images
	• **Compulsions**
	  ◦ Response to obsessions with repeated behaviors or mental acts
	  ◦ Behaviors not connected realistically with preventing feared event
	• Time-consuming (>1 hr/day) or causing significant distress or impairment

Treatment	• Selective serotonin reuptake inhibitor • Cognitive-behavioral therapy (exposure & response prevention)

This patient's repetitive behaviors with food and grooming appear to be compulsions performed in response to an obsession with symmetry and exactness, which is consistent with a primary diagnosis of **obsessive-compulsive disorder (OCD)**. Obsessions are **persistent and unwanted thoughts**, urges, or images that often drive an individual to perform compulsions: **ritualistic behaviors** or mental acts (eg, counting) to alleviate anxiety or prevent a feared event. In this situation, the patient's obsession with symmetry results in compulsions to cut her food into uniform pieces and groom her hair evenly to prevent a bad outcome.

Compulsive behaviors in OCD are often illogical (eg, skipping over sidewalk cracks to prevent injury to a relative) or are excessive in nature (eg, checking if the front door is locked 50 times a day). For diagnosis, obsessions or compulsions must be **time-consuming** (>1 hr/day) or cause significant **distress** or functional **impairment**. OCD is typically a chronic disorder starting in childhood or adolescence.

(Choice A) This patient has a normal BMI based on age and sex, and her unusual eating behaviors are related to her obsessions and compulsions rather than intense fear of weight gain.

(Choice B) In body dysmorphic disorder, individuals have a preoccupation with perceived defects in physical appearance. In contrast, this patient's eating and grooming rituals are driven by a symmetry obsession and the need to prevent a feared event.

(Choice C) Generalized anxiety disorder involves excessive worry about multiple issues and is not associated with intrusive thoughts and compulsive behaviors.

(Choice E) Obsessive-compulsive personality disorder involves a lifelong pattern of insistence on control, orderliness, and perfection and does

This patient's repetitive behaviors with food and grooming appear to be compulsions performed in response to an obsession with symmetry and exactness, which is consistent with a primary diagnosis of **obsessive-compulsive disorder (OCD)**. Obsessions are **persistent and unwanted thoughts**, urges, or images that often drive an individual to perform compulsions: **ritualistic behaviors** or mental acts (eg, counting) to alleviate anxiety or prevent a feared event. In this situation, the patient's obsession with symmetry results in compulsions to cut her food into uniform pieces and groom her hair evenly to prevent a bad outcome.

Compulsive behaviors in OCD are often illogical (eg, skipping over sidewalk cracks to prevent injury to a relative) or are excessive in nature (eg, checking if the front door is locked 50 times a day). For diagnosis, obsessions or compulsions must be **time-consuming** (>1 hr/day) or cause significant **distress** or functional **impairment**. OCD is typically a chronic disorder starting in childhood or adolescence.

(Choice A) This patient has a normal BMI based on age and sex, and her unusual eating behaviors are related to her obsessions and compulsions rather than intense fear of weight gain.

(Choice B) In body dysmorphic disorder, individuals have a preoccupation with perceived defects in physical appearance. In contrast, this patient's eating and grooming rituals are driven by a symmetry obsession and the need to prevent a feared event.

(Choice C) Generalized anxiety disorder involves excessive worry about multiple issues and is not associated with intrusive thoughts and compulsive behaviors.

(Choice E) Obsessive-compulsive personality disorder involves a lifelong pattern of insistence on control, orderliness, and perfection and does not include frank obsessions and compulsions that are present in OCD. Personality disorders are generally not diagnosed before age 18 (or in young adolescents) and would not explain this patient's recurrent compulsions performed in response to anxiety-inducing obsessions.

(Choice F) Trichotillomania (hair-pulling disorder) involves recurrent pulling of hair and repeated attempts to decrease or stop the behavior. It would not be diagnosed in this patient who pulls out her hair as part of a symmetry obsession and compulsions.

Educational objective:
Obsessive-compulsive disorder is characterized by persistent, unwanted thoughts (obsessions) and repetitive, time-consuming rituals (compulsions) that the individual feels driven to perform to alleviate anxiety.

References

- Obsessive-compulsive disorder

A 10-year-old boy is brought to the pediatric clinic due to unusual classroom behavior for the past year, which has worsened over the last few weeks. Although the patient is generally quiet, he intermittently disrupts the class with sniffling, repetitive throat clearing, and grunting sounds. His teacher states that the boy distracts other students and that his focus in class is poor. The behaviors worsen when he is tired, stressed, or excited. The patient's parents are also concerned because he has only a few friends and his classmates make fun of him. Medical history is significant for recurrent otitis media as a toddler, atopic dermatitis, and an influenza infection 9 months ago. Family history is significant for rheumatoid arthritis and anxiety in his mother. Temperature is 36.7 C (98 F), pulse is 78/min, blood pressure is 110/72 mm Hg, and respirations are 14/min. Physical examination shows frequent eye blinking and shoulder shrugging but is otherwise normal. Which of the following is the most likely diagnosis?

A. Attention-deficit hyperactivity disorder
B. Stereotypic movement disorder
C. Sydenham chorea
D. Tourette syndrome
E. Wilson disease

Submit

A 10-year-old boy is brought to the pediatric clinic due to unusual classroom behavior for the past year, which has worsened over the last few weeks. Although the patient is generally quiet, he intermittently disrupts the class with sniffling, repetitive throat clearing, and grunting sounds. His teacher states that the boy distracts other students and that his focus in class is poor. The behaviors worsen when he is tired, stressed, or excited. The patient's parents are also concerned because he has only a few friends and his classmates make fun of him. Medical history is significant for recurrent otitis media as a toddler, atopic dermatitis, and an influenza infection 9 months ago. Family history is significant for rheumatoid arthritis and anxiety in his mother. Temperature is 36.7 C (98 F), pulse is 78/min, blood pressure is 110/72 mm Hg, and respirations are 14/min. Physical examination shows frequent eye blinking and shoulder shrugging but is otherwise normal. Which of the following is the most likely diagnosis?

- A. Attention-deficit hyperactivity disorder (3%)
- B. Stereotypic movement disorder (4%)
- C. Sydenham chorea (2%)
- ✓ D. Tourette syndrome (89%)
- E. Wilson disease (0%)

Omitted
Correct answer
D

89%
Answered correctly

02 secs
Time Spent

02/03/2020
Last Updated

Explanation

Tourette syndrome	

Tourette syndrome	

Clinical features	• Both **multiple motor tics & ≥1 vocal tics** (not necessarily concurrent) >1 year
	  ◦ Motor: facial grimacing, blinking, head/neck jerking, shoulder shrugging, tongue protrusion, sniffing
	  ◦ Vocal: grunting, snorting, throat clearing, barking, yelling, coprolalia (obscenities)
	• Onset age <18 (commonly age 6-15)

This patient is experiencing **both vocal** and multiple **motor tics** (sudden, intermittent, nonrhythmic motor movements and vocalizations) consistent with a diagnosis of **Tourette syndrome**. Vocal tics can range from simple sounds (eg, coughing, grunting, throat clearing) to blurting out inappropriate comments and obscenities (coprolalia). They are typically preceded by irresistible urges and followed by feelings of relief. Tics have a waxing and waning course and are typically exacerbated by stress or fatigue, but they can be suppressed voluntarily for brief periods.

Tourette syndrome is more **common** in **boys** and typically presents at **age 6-15**. Comorbid psychiatric conditions such as attention-deficit/hyperactivity disorder (ADHD) and obsessive-compulsive disorder are common.

(Choice A) Although ADHD is a common comorbidity, this patient does not exhibit sufficient symptoms of inattention and hyperactivity/impulsivity required for this diagnosis.

(Choice B) Stereotypic movement disorder is characterized by simple repetitive movements (eg, rocking, head banging), which are voluntary in nature and seemingly purposeless. They are often seen in children with autism spectrum disorders and intellectual disability and are a common form of self-soothing.

(Choice C) Sydenham chorea is a manifestation of rheumatic fever (related to group A streptococcal infection) characterized by choreiform movements (brief, random, irregular contractions of the limbs and face), emotional lability, and hypotonia. Tics can be differentiated from chorea by their patterned, repetitive appearance; ability to be temporarily suppressed; and association with premonitory urges.

This patient is experiencing **both vocal** and multiple **motor tics** (sudden, intermittent, nonrhythmic motor movements and vocalizations) consistent with a diagnosis of **Tourette syndrome**. Vocal tics can range from simple sounds (eg, coughing, grunting, throat clearing) to blurting out inappropriate comments and obscenities (coprolalia). They are typically preceded by irresistible urges and followed by feelings of relief. Tics have a waxing and waning course and are typically exacerbated by stress or fatigue, but they can be suppressed voluntarily for brief periods.

Tourette syndrome is more **common** in **boys** and typically presents at **age 6-15**. Comorbid psychiatric conditions such as attention-deficit/hyperactivity disorder (ADHD) and obsessive-compulsive disorder are common.

(Choice A) Although ADHD is a common comorbidity, this patient does not exhibit sufficient symptoms of inattention and hyperactivity/impulsivity required for this diagnosis.

(Choice B) Stereotypic movement disorder is characterized by simple repetitive movements (eg, rocking, head banging), which are voluntary in nature and seemingly purposeless. They are often seen in children with autism spectrum disorders and intellectual disability and are a common form of self-soothing.

(Choice C) Sydenham chorea is a manifestation of rheumatic fever (related to group A streptococcal infection) characterized by choreiform movements (brief, random, irregular contractions of the limbs and face), emotional lability, and hypotonia. Tics can be differentiated from chorea by their patterned, repetitive appearance; ability to be temporarily suppressed; and association with premonitory urges.

(Choice E) Wilson disease is caused by copper accumulation and can present in children and adolescents. It is characterized by liver dysfunction, neurological signs (eg, dysarthria, dystonia, ataxia) rather than tics, and psychiatric abnormalities (eg, depression, psychosis).

Educational objective:
Tourette syndrome is a common childhood neuropsychiatric disorder characterized by both vocal and multiple motor tics. These tics characteristically wax and wane, can be suppressed temporarily, and are preceded by a premonitory urge.

References

- Tourette syndrome: update.
- Clinical assessment of Tourette syndrome and tic disorders.
- Tourette syndrome and chronic tic disorders: the clinical spectrum beyond tics.

A 21-year-old woman comes to the office due to constipation and vague abdominal pain. She says, "For the last few months I have felt bloated and my stomach doesn't feel right." Review of systems is notable for irregular menses and occasional fatigue. Medical history is significant for a broken femur at age 6 but is otherwise noncontributory. Family history is significant for Graves disease in her father and primary myelofibrosis in her paternal grandmother. The patient smokes a pack of cigarettes daily and drinks wine when relaxing with friends. She does not use illicit drugs. Temperature is 37.2 C (99 F), blood pressure is 90/60 mm Hg, pulse is 118/min, and respirations are 16/min. BMI is 25.6 kg/m^2. Physical examination shows eroded enamel of the teeth.

Laboratory results are as follows:

Serum chemistry	
Sodium	134 mEq/L
Potassium	3.2 mEq/L
Chloride	92 mEq/L
Bicarbonate	30 mEq/L
Liver function studies	
Aspartate aminotransferase (SGOT)	20 U/L
Alanine aminotransferase (SGPT)	24 U/L
Amylase	161 U/L
Lipase	32 U/L (normal: 12-61)

Which of the following is the most likely cause of this patient's condition?

A. Acute pancreatitis

Potassium	3.2 mEq/L
Chloride	92 mEq/L
Bicarbonate	30 mEq/L

Liver function studies

Aspartate aminotransferase (SGOT)	20 U/L
Alanine aminotransferase (SGPT)	24 U/L
Amylase	161 U/L
Lipase	32 U/L (normal: 12-61)

Which of the following is the most likely cause of this patient's condition?

- A. Acute pancreatitis
- B. Alcohol abuse
- C. Bulimia nervosa
- D. Hypothyroidism
- E. Irritable bowel syndrome
- F. Sjögren syndrome

Submit

Potassium	3.2 mEq/L
Chloride	92 mEq/L
Bicarbonate	30 mEq/L
Liver function studies	
Aspartate aminotransferase (SGOT)	20 U/L
Alanine aminotransferase (SGPT)	24 U/L
Amylase	161 U/L
Lipase	32 U/L (normal: 12-61)

Which of the following is the most likely cause of this patient's condition?

- A. Acute pancreatitis (5%)
- B. Alcohol abuse (1%)
- ✓ C. Bulimia nervosa (82%)
- D. Hypothyroidism (4%)
- E. Irritable bowel syndrome (3%)
- F. Sjögren syndrome (3%)

Omitted
Correct answer

82%
Answered correctly

03 secs
Time Spent

02/23/2020
Last Updated

Bulimia nervosa	
Clinical features	• Recurrent episodes of binge eating & inappropriate compensatory behavior (eg, vomiting, laxatives, excessive exercise) • Excessive preoccupation with body weight & shape • Body weight within or above normal range • Symptoms: abdominal pain, bloating, constipation, lethargy, irregular menses
Physical examination	• Hypotension, tachycardia • Dental enamel erosion, caries • Dorsal hand calluses • Parotid gland swelling
Laboratory findings	• Hypokalemia • Metabolic alkalosis

This patient's hypotension, tachycardia, **dental erosion**, and electrolyte abnormalities (eg, **hypokalemia**, hypochloremia, elevated bicarbonate [likely due to **metabolic alkalosis**]) are consistent with self-induced vomiting, suggesting a diagnosis of **bulimia nervosa** (BN). Chronic vomiting can also result in **calluses** on the **dorsum of the hands** (Russell sign) and **enlarged parotid** glands with resultant increased salivary amylase.

Patients with BN are excessively preoccupied with their weight and shape and engage in repeated episodes of binge eating and inappropriate compensatory behaviors (eg, vomiting, laxatives, diuretics, fasting, excessive exercise) to prevent weight gain. Other common signs of BN include dry skin, menstrual irregularities, abdominal bloating, and constipation.

(Choice A) Serum amylase, which does not typically differentiate between salivary and pancreatic origins, can be elevated in both pancreatic disease and BN; however, lipase would also be significantly increased in pancreatic disease, whereas this patient has increased amylase alone. Acute pancreatitis commonly presents with pain and an acute abdomen.

(Choice B) In alcohol abuse, expected findings would include elevated liver enzymes and other signs suggestive of abuse and dependence (eg, inability to control drinking, use in hazardous situations, tolerance, withdrawal symptoms).

(Choice D) Hypothyroidism is characterized by weakness, fatigue, cold intolerance, constipation, weight changes, menorrhagia, dry skin, and

This patient's hypotension, tachycardia, **dental erosion**, and electrolyte abnormalities (eg, **hypokalemia**, hypochloremia, elevated bicarbonate [likely due to **metabolic alkalosis**]) are consistent with self-induced vomiting, suggesting a diagnosis of **bulimia nervosa** (BN). Chronic vomiting can also result in **calluses** on the **dorsum of the hands** (Russell sign) and **enlarged parotid** glands with resultant increased salivary amylase.

Patients with BN are excessively preoccupied with their weight and shape and engage in repeated episodes of binge eating and inappropriate compensatory behaviors (eg, vomiting, laxatives, diuretics, fasting, excessive exercise) to prevent weight gain. Other common signs of BN include dry skin, menstrual irregularities, abdominal bloating, and constipation.

(Choice A) Serum amylase, which does not typically differentiate between salivary and pancreatic origins, can be elevated in both pancreatic disease and BN; however, lipase would also be significantly increased in pancreatic disease, whereas this patient has increased amylase alone. Acute pancreatitis commonly presents with pain and an acute abdomen.

(Choice B) In alcohol abuse, expected findings would include elevated liver enzymes and other signs suggestive of abuse and dependence (eg, inability to control drinking, use in hazardous situations, tolerance, withdrawal symptoms).

(Choice D) Hypothyroidism is characterized by weakness, fatigue, cold intolerance, constipation, weight changes, menorrhagia, dry skin, and bradycardia. It would not explain this patient's tachycardia, dental erosion, hypokalemic metabolic alkalosis, or hyperamylasemia.

(Choice E) Irritable bowel syndrome is a functional gastrointestinal disorder characterized by chronic abdominal pain, constipation, and/or diarrhea. It is a diagnosis of exclusion and would not explain this patient's physical examination and laboratory findings.

(Choice F) Sjögren syndrome, an autoimmune disorder mainly affecting women, presents with dry eyes and a dry mouth. Lack of normal saliva production can lead to enlarged salivary glands and dental caries. Sjögren syndrome would not explain this patient's hypokalemic metabolic alkalosis.

Educational objective:
Bulimia nervosa is characterized by episodes of binge eating and compensatory weight-reduction behaviors. Signs of self-induced vomiting include hypokalemia, metabolic alkalosis, parotid gland enlargement, dorsal hand calluses, and dental erosion.

References

- Bulimia nervosa - medical complications.
- Initial evaluation, diagnosis, and treatment of anorexia nervosa and bulimia nervosa.

dry skin, menstrual irregularities, abdominal bloating, and constipation.

(Choice A) Serum amylase, which does not typically differentiate between salivary and pancreatic origins, can be elevated in both pancreatic disease and BN; however, lipase would also be significantly increased in pancreatic disease, whereas this patient has increased amylase alone. Acute pancreatitis commonly presents with pain and an acute abdomen.

(Choice B) In alcohol abuse, expected findings would include elevated liver enzymes and other signs suggestive of abuse and dependence (eg, inability to control drinking, use in hazardous situations, tolerance, withdrawal symptoms).

(Choice D) Hypothyroidism is characterized by weakness, fatigue, cold intolerance, constipation, weight changes, menorrhagia, dry skin, and bradycardia. It would not explain this patient's tachycardia, dental erosion, hypokalemic metabolic alkalosis, or hyperamylasemia.

(Choice E) Irritable bowel syndrome is a functional gastrointestinal disorder characterized by chronic abdominal pain, constipation, and/or diarrhea. It is a diagnosis of exclusion and would not explain this patient's physical examination and laboratory findings.

(Choice F) Sjögren syndrome, an autoimmune disorder mainly affecting women, presents with dry eyes and a dry mouth. Lack of normal saliva production can lead to enlarged salivary glands and dental caries. Sjögren syndrome would not explain this patient's hypokalemic metabolic alkalosis.

Educational objective:
Bulimia nervosa is characterized by episodes of binge eating and compensatory weight-reduction behaviors. Signs of self-induced vomiting include hypokalemia, metabolic alkalosis, parotid gland enlargement, dorsal hand calluses, and dental erosion.

References

- Bulimia nervosa - medical complications.
- Initial evaluation, diagnosis, and treatment of anorexia nervosa and bulimia nervosa.

Behavioral science	Psychiatric/Behavioral & Substance Abuse	Bulimia nervosa
Subject	System	Topic

Copyright © UWorld. All rights reserved.

A 45-year-old woman comes to the office for follow-up of type 2 diabetes mellitus. Current glycated hemoglobin level is 9%. The patient was diagnosed with diabetes a few months ago and was started on metformin twice daily. When the physician asks how she is doing with her medication, she replies, "I use it most of the time, but it's easy to forget when I am feeling good." Which of the following statements is most appropriate to begin a discussion about this patient's nonadherence to her medication?

A. "If you're not more consistent with your medication, we may have to switch to insulin injections."

B. "It's very important that you take your medication regularly, even when you feel fine."

C. "Taking medications daily can be difficult, especially on days you feel well."

D. "Uncontrolled diabetes can result in many dangerous medical complications."

E. "You seem to have difficulty understanding the risks of untreated diabetes, so let's discuss them."

Submit

A 45-year-old woman comes to the office for follow-up of type 2 diabetes mellitus. Current glycated hemoglobin level is 9%. The patient was diagnosed with diabetes a few months ago and was started on metformin twice daily. When the physician asks how she is doing with her medication, she replies, "I use it most of the time, but it's easy to forget when I am feeling good." Which of the following statements is most appropriate to begin a discussion about this patient's nonadherence to her medication?

- A. "If you're not more consistent with your medication, we may have to switch to insulin injections." (0%)
- B. "It's very important that you take your medication regularly, even when you feel fine." (20%)
- ✓ C. "Taking medications daily can be difficult, especially on days you feel well." (73%)
- D. "Uncontrolled diabetes can result in many dangerous medical complications." (1%)
- E. "You seem to have difficulty understanding the risks of untreated diabetes, so let's discuss them." (3%)

Omitted
Correct answer
C

73%
Answered correctly

01 sec
Time Spent

06/09/2020
Last Updated

Explanation

This patient with diabetes has suboptimal control of her blood glucose levels as evidenced by her elevated glycosylated hemoglobin level (HbA1c). She may also have limited understanding of her disease and the potential complications of poor glycemic control (believing that she can skip medication when she feels good). **Medication nonadherence** is more likely to occur when detrimental effects of missed doses are not immediately apparent, as in this situation.

The best initial approach to medication nonadherence is to **acknowledge the difficulty** of taking a medication daily. Validating this patient's experience, rather than immediately judging her behavior, is more likely to facilitate an open discussion of her understanding of the illness and the

This patient with diabetes has suboptimal control of her blood glucose levels as evidenced by her elevated glycosylated hemoglobin level (HbA1c). She may also have limited understanding of her disease and the potential complications of poor glycemic control (believing that she can skip medication when she feels good). **Medication nonadherence** is more likely to occur when detrimental effects of missed doses are not immediately apparent, as in this situation.

The best initial approach to medication nonadherence is to **acknowledge the difficulty** of taking a medication daily. Validating this patient's experience, rather than immediately judging her behavior, is more likely to facilitate an open discussion of her understanding of the illness and the factors contributing to nonadherence. Addressing possible misunderstandings about treatment in a **nonjudgmental** manner is crucial to promote medication adherence and strengthen the therapeutic alliance.

(Choices A and E) These statements are condescending and judgmental in tone. Physicians should avoid criticizing the patient's behavior or assuming a lack of knowledge.

(Choice B) This statement gives the patient a directive without first exploring her perspective and understanding of the illness. The best initial approach is to engage the patient with a statement that validates her experience and encourages open discussion of her challenges with medication adherence.

(Choice D) It would be inappropriate to initiate a discussion on nonadherence by warning the patient about dangerous complications. Education about the illness and the importance of adherence should be done in a supportive and nonthreatening manner.

Educational objective:
Physicians should use a nonjudgmental, patient-centered approach in discussing treatment nonadherence. Acknowledging the difficulty of taking medication regularly can strengthen the therapeutic alliance, potentially improving patient receptiveness to educational efforts.

References

- Health communication, self-care, and treatment satisfaction among low-income diabetes patients in a public health setting.
- Patient-provider communication: understanding diabetes management among adult females.

Behavioral science	Psychiatric/Behavioral & Substance Abuse	Treatment adherence
Subject	System	Topic

A 3-year-old boy is brought to the office for a well-child visit. His mother reports that, apart from an ear infection last year, he is in good health. The child started preschool this year. He plays alongside other children and often copies what they are doing but does not play cooperatively with them. The patient knows his age and gender and speaks in 3-word sentences. He can ride a tricycle. The patient cannot use a spoon or fork but enjoys eating with his hands. He scribbles spontaneously but cannot copy a circle. He weighs 14.5 kg (32 lb) and is 96.5 cm (3 ft 2 in) tall. Head circumference is 50.8 cm (20 in). Which of the following developmental milestones is likely delayed in this patient?

A. Cognitive

B. Fine motor

C. Gross motor

D. Language

E. Social

Submit

A 3-year-old boy is brought to the office for a well-child visit. His mother reports that, apart from an ear infection last year, he is in good health. The child started preschool this year. He plays alongside other children and often copies what they are doing but does not play cooperatively with them. The patient knows his age and gender and speaks in 3-word sentences. He can ride a tricycle. The patient cannot use a spoon or fork but enjoys eating with his hands. He scribbles spontaneously but cannot copy a circle. He weighs 14.5 kg (32 lb) and is 96.5 cm (3 ft 2 in) tall. Head circumference is 50.8 cm (20 in). Which of the following developmental milestones is likely delayed in this patient?

A. Cognitive (5%)
✓ B. Fine motor (73%)
C. Gross motor (2%)
D. Language (6%)
E. Social (11%)

Omitted
Correct answer
B

73%
Answered correctly

02 secs
Time Spent

01/25/2020
Last Updated

Explanation

Developmental milestones during toddlerhood must be thoroughly assessed by practitioners during routine well-child examinations. Milestones are divided into categories, including cognitive/academic, gross motor control, fine motor control, social behavior, and language. Because each child is different, milestones should be used as a guideline. For instance, one child may be able to kick a ball at 18 months and another at 24 months. A child who is deficient in a single task is unlikely to have developmental delay, but failure to reach several milestones by the appropriate age, or a marked delay in one area, requires further evaluation.

Correct answer
B

73%
Answered correctly

02 secs
Time Spent

01/25/2020
Last Updated

Explanation

Developmental milestones during toddlerhood must be thoroughly assessed by practitioners during routine well-child examinations. Milestones are divided into categories, including cognitive/academic, gross motor control, fine motor control, social behavior, and language. Because each child is different, milestones should be used as a guideline. For instance, one child may be able to kick a ball at 18 months and another at 24 months. A child who is deficient in a single task is unlikely to have developmental delay, but failure to reach several milestones by the appropriate age, or a marked delay in one area, requires further evaluation.

Three-year-olds should have the fine motor skills to **copy a circle** and **use utensils**; this patient has not reached his expected fine motor milestones and should undergo additional evaluation.

(Choices A, C, D, and E) This patient's cognitive, gross motor, language, and social development are within the expected range. By age 3, children are expected to describe their age and gender and follow simple directions (cognitive). They are able to climb stairs with alternating feet and ride a tricycle by operating the pedals (gross motor) and speak in simple sentences (language). In addition, 3-year-olds engage in imaginative play and play in parallel but not cooperatively with others (social). Toilet training often begins at age 2 or 3.

Educational objective:
By age 3, a child is expected to play imaginatively in parallel with others, speak in simple sentences, copy a circle, use utensils, and ride a tricycle.

References

- Developmental delay: when and how to screen.

Behavioral science	Psychiatric/Behavioral & Substance Abuse	Developmental milestones
Subject	System	Topic

Copyright © UWorld. All rights reserved.

Correct answer
B

73%
Answered correctly

02 secs
Time Spent

01/25/2020
Last Updated

Explanation

Developmental milestones
are divided into categories
child is different, milestone
months. A child who is de
age, or a marked delay in

Three-year-olds should h
milestones and should un

(Choices A, C, D, and E)
children are expected to d
and ride a tricycle by oper
play and play in parallel b

Educational objective:
By age 3, a child is expect

References

- Developmental delay:

Behavioral science
Subject

Exhibit Display

Developmental milestones during toddlerhood

Age	Gross motor	Fine motor	Language	Social/Cognitive
12 months	• Stands well • Walks first steps independently • Throws a ball	• 2-finger pincer grasp	• Says first words (other than "mama" & "dada")	• Separation anxiety • Follows 1-step commands with gestures
18 months	• Runs • Kicks a ball	• Builds a tower of 2-4 cubes • Removes clothing	• 10- to 25-word vocabulary • Identifies ≥1 body parts	• Understands "mine" • Begins pretend play
2 years	• Walks up/down stairs with both feet on each step • Jumps	• Builds a tower of 6 cubes • Copies a line	• Vocabulary ≥50 words • 2-word phrases	• Follows 2-step commands • Parallel play • Begins toilet training
3 years	• Walks up/down stairs with alternating feet • Rides tricycle	• Copies a circle • Uses utensils	• 3-word sentences • Speech 75% intelligible	• Knows age/gender • Imaginative play

Add To New Card | Existing Card

Copyright © UWorld. All rights reserved.

Correct answer
B

Explanation

Developmental mileston
are divided into categori
child is different, milesto
months. A child who is
age, or a marked delay i

Three-year-olds should
milestones and should u

(Choices A, C, D, and E
children are expected to
and ride a tricycle by op
play and play in parallel

Educational objective:
By age 3, a child is expe

References

- Developmental delay

Behavioral science
Subject

Developmental milestones during toddlerhood

Age	Gross motor	Fine motor	Language	Social/Cognitive
12 months	• Stands well • Walks first steps independently • Throws a ball	• 2-finger pincer grasp	• Says first words (other than "mama" & "dada")	• Separation anxiety • Follows 1-step commands with gestures
18 months	• Runs • Kicks a ball	• Builds a tower of 2-4 cubes • Removes clothing	• 10- to 25-word vocabulary • Identifies ≥1 body parts	• Understands "mine" • Begins pretend play
2 years	• Walks up/down stairs with both feet on each step • Jumps	• Builds a tower of 6 cubes • Copies a line	• Vocabulary ≥50 words • 2-word phrases	• Follows 2-step commands • Parallel play • Begins toilet training
3 years	• Walks up/down stairs with alternating feet • Rides tricycle	• Copies a circle • Uses utensils	• 3-word sentences • Speech 75% intelligible	• Knows age/gender • Imaginative play
4 years	• Balances & hops on 1 foot	• Copies a cross	• Identifies colors • Speech 100% intelligible	• Cooperative play
5 years	• Skips • Catches ball with 2 hands	• Copies a square • Ties shoelaces • Dresses/bathes independently • Prints letters	• Counts to 10 • 5-word sentences	• Has friends • Completes toilet training

A 9-year-old boy is brought to the pediatrician due to poor school performance and difficulty making friends. His parents say he always had "very high energy," but they noticed that this got worse after they moved 8 months ago, which they attributed to a normal adjustment period. Over the past several months, however, the parents have received repeated phone calls from his teachers, reporting that he does not listen in class, has difficulty staying in his seat, turns in assignments late without his name, and frequently disrupts the class by talking out of turn. At home the boy forgets to do his daily chores, regularly loses his books and homework, and delays the family by taking too long getting ready for school in the morning. When his older brother teases him about this, the patient becomes irritable, and on a few occasions has shouted profanities and tried to hit his brother. Which of the following is the most likely explanation for this patient's behavior?

A. Adjustment disorder
B. Attention-deficit hyperactivity disorder
C. Conduct disorder
D. Social anxiety disorder
E. Oppositional defiant disorder

Submit

A 9-year-old boy is brought to the pediatrician due to poor school performance and difficulty making friends. His parents say he always had "very high energy," but they noticed that this got worse after they moved 8 months ago, which they attributed to a normal adjustment period. Over the past several months, however, the parents have received repeated phone calls from his teachers, reporting that he does not listen in class, has difficulty staying in his seat, turns in assignments late without his name, and frequently disrupts the class by talking out of turn. At home the boy forgets to do his daily chores, regularly loses his books and homework, and delays the family by taking too long getting ready for school in the morning. When his older brother teases him about this, the patient becomes irritable, and on a few occasions has shouted profanities and tried to hit his brother. Which of the following is the most likely explanation for this patient's behavior?

A. Adjustment disorder (5%)
✓ B. Attention-deficit hyperactivity disorder (79%)
C. Conduct disorder (4%)
D. Social anxiety disorder (0%)
E. Oppositional defiant disorder (9%)

Omitted
Correct answer
B

79%
Answered correctly

03 secs
Time Spent

01/29/2020
Last Updated

Explanation

Attention-deficit hyperactivity disorder	
	• Inattentive &/or hyperactive/impulsive symptoms for ≥6 months

Explanation

Attention-deficit hyperactivity disorder	

Clinical features	• Inattentive &/or hyperactive/impulsive symptoms for ≥6 months
	  ◦ **Inattentive symptoms:** Difficulty focusing, distractible, does not listen or follow instructions, disorganized, forgetful, loses/misplaces objects
	  ◦ **Hyperactive/impulsive symptoms:** Fidgety, unable to sit still, "driven by a motor," hyper-talkative, interrupts, blurts out answers
	• Several symptoms present **before age 12**
	• Symptoms occur in at least two settings (home, school) & cause functional impairment
	• Subtypes: Predominantly inattentive, predominantly hyperactive/impulsive, combined type

Attention-deficit hyperactivity disorder (ADHD) is a common behavioral disorder characterized by a persistent pattern of inattention and/or hyperactivity/impulsivity that interferes with functioning in **≥2 settings** (eg, school, home). Diagnosis requires the presence of symptoms **before age 12** with ≥6 inattentive and/or hyperactive/impulsive symptoms for ≥6 months. This patient's combination of **inattentive** symptoms (ie, forgetful, disorganized, loses things) and **hyperactive/impulsive** symptoms (ie, difficulty staying seated, interrupts others) is characteristic of the combined subtype. ADHD is more common in boys; girls are more likely to have the inattentive subtype.

(Choice A) Adjustment disorders are diagnosed when symptoms develop within 3 months of an identifiable stressor. This child's symptoms predated the family move.

(Choice C) Although this child occasionally tries to hit his sibling when frustrated, he does not exhibit behavior that consistently violates major societal norms or the basic rights of others (eg, repeated aggression, property destruction, theft, deceitfulness, rule violations), which would characterize conduct disorder.

(Choice D) Children with ADHD often experience difficulty with peer relationships due to their impulsive and disruptive behaviors. However, this child does not exhibit the excessive social anxiety and fear of negative peer evaluation that is characteristic of social anxiety disorder.

(Choice E) Oppositional defiant disorder (ODD) involves a pattern of angry/irritable mood and argumentative/defiant behavior toward authority

Attention-deficit hyperactivity disorder (ADHD) is a common behavioral disorder characterized by a persistent pattern of inattention and/or hyperactivity/impulsivity that interferes with functioning in **≥2 settings** (eg, school, home). Diagnosis requires the presence of symptoms **before age 12** with ≥6 inattentive and/or hyperactive/impulsive symptoms for ≥6 months. This patient's combination of **inattentive** symptoms (ie, forgetful, disorganized, loses things) and **hyperactive/impulsive** symptoms (ie, difficulty staying seated, interrupts others) is characteristic of the combined subtype. ADHD is more common in boys; girls are more likely to have the inattentive subtype.

(Choice A) Adjustment disorders are diagnosed when symptoms develop within 3 months of an identifiable stressor. This child's symptoms predated the family move.

(Choice C) Although this child occasionally tries to hit his sibling when frustrated, he does not exhibit behavior that consistently violates major societal norms or the basic rights of others (eg, repeated aggression, property destruction, theft, deceitfulness, rule violations), which would characterize conduct disorder.

(Choice D) Children with ADHD often experience difficulty with peer relationships due to their impulsive and disruptive behaviors. However, this child does not exhibit the excessive social anxiety and fear of negative peer evaluation that is characteristic of social anxiety disorder.

(Choice E) Oppositional defiant disorder (ODD) involves a pattern of angry/irritable mood and argumentative/defiant behavior toward authority figures or vindictiveness. Although ODD may occur as a comorbid diagnosis with ADHD, this child's difficulty completing tasks, inability to sit still, and interrupting others at school are more likely related to his ADHD symptoms than to willfully defiant behavior.

Educational objective:
Attention-deficit hyperactivity disorder is characterized by a pattern of inattention and/or hyperactivity/impulsivity that interferes with functioning in ≥2 settings.

References

- Attention-deficit/hyperactivity disorder (ADHD).

Behavioral science	Psychiatric/Behavioral & Substance Abuse	Attention deficit hyperactivity disorder
Subject	System	Topic

Copyright © UWorld. All rights reserved.

A 46-year-old woman is hospitalized due to severe depression and fatigue. She has no other medical problems. Routine laboratory tests are ordered and the patient is started on antidepressant medication. After a week, her depression improves slightly and she is discharged home to continue with outpatient care. However, the patient remains severely fatigued and is unable to return to her job, forcing her to take a leave of absence. At her follow-up appointment 2 weeks later, review of the hospital record by the outpatient physician reveals a TSH level of 15.2 μU/mL that was never addressed by the inpatient physician. Subsequent evaluation and treatment with thyroid hormone result in rapid improvement of her depression and fatigue. Which of the following is the appropriate categorization for this type of medical error?

- A. Malpractice
- B. Near miss
- C. Non-preventable adverse event
- D. Preventable adverse event
- E. Sentinel event

Submit

A 46-year-old woman is hospitalized due to severe depression and fatigue. She has no other medical problems. Routine laboratory tests are ordered and the patient is started on antidepressant medication. After a week, her depression improves slightly and she is discharged home to continue with outpatient care. However, the patient remains severely fatigued and is unable to return to her job, forcing her to take a leave of absence. At her follow-up appointment 2 weeks later, review of the hospital record by the outpatient physician reveals a TSH level of 15.2 μU/mL that was never addressed by the inpatient physician. Subsequent evaluation and treatment with thyroid hormone result in rapid improvement of her depression and fatigue. Which of the following is the appropriate categorization for this type of medical error?

- A. Malpractice (18%)
- B. Near miss (13%)
- C. Non-preventable adverse event (0%)
- ✓ D. Preventable adverse event (61%)
- E. Sentinel event (6%)

Omitted
Correct answer
D

61%
Answered correctly

18 secs
Time Spent

06/29/2020
Last Updated

Explanation

Hypothyroidism is a known cause of depression and is routinely screened for with a TSH level. This patient's elevated level (normal: 0.5-5.0 μU/mL) should have been detected during hospitalization and prompted further workup. The inpatient physician's failure to note and address the abnormality is a **preventable medical error** that resulted in **delayed diagnosis**. Preventable medical errors involve harm to the patient by an **act of commission or omission** rather than from the underlying disease and are the result of **failure to follow** evidence-based **best practice**

Hypothyroidism is a known cause of depression and is routinely screened for with a TSH level. This patient's elevated level (normal: 0.5-5.0 μU/mL) should have been detected during hospitalization and prompted further workup. The inpatient physician's failure to note and address the abnormality is a **preventable medical error** that resulted in **delayed diagnosis**. Preventable medical errors involve harm to the patient by an **act of commission or omission** rather than from the underlying disease and are the result of **failure to follow** evidence-based **best practice guidelines**.

(Choice A) Malpractice is a legal determination; it involves situations in which the treatment provided is below the accepted standard of practice and has resulted in injury or death to the patient. It is not a category of medical error but rather refers to the consequence of many different types of errors that result in harm.

(Choice B) A near miss is a medical error that is recognized before any harm is done to the patient (eg, a patient is prescribed a lethal dose of medication, but the error is caught by the pharmacist). In contrast, the patient in this case has been harmed by the delay in appropriate diagnosis and treatment.

(Choice C) This error would have been prevented if the physician had adhered to the standard of care. A non-preventable adverse event is a complication that cannot be prevented given the current state of medical knowledge (eg, an allergic reaction to a medication in a patient with no known history of drug allergies).

(Choice E) A sentinel event is an unexpected occurrence involving death or serious physical or psychological injury (eg, inpatient suicide, death of a full-term infant, retained object after surgery) that requires immediate investigation.

Educational objective:
A preventable adverse event is defined as injury to a patient due to failure to follow evidence-based best practice guidelines.

References

- Reducing medical errors and adverse events.

Behavioral science	General Principles	Medical errors
Subject	System	Topic

Copyright © UWorld. All rights reserved.

A 22-year-old man comes to the emergency department due to sudden-onset pain and stiffness on one side of his neck. He was diagnosed with a psychiatric disorder 2 days ago and has been adherent with his newly prescribed medication. For the past few months, the patient has heard voices telling him to quit his job, and he believes that his girlfriend's parents are monitoring his sexual thoughts with a special device. He has been socially withdrawn and has difficulty showering regularly. Vital signs are within normal limits. The head is tilted to one side and cannot be straightened without considerable pain. The most likely cause of this patient's symptoms is antagonism of which of the following receptors?

A. Alpha-1 adrenergic
B. Dopaminergic D2
C. GABA-A
D. Histaminergic H1
E. Muscarinic M1
F. Serotonergic 5-HT2A

Submit

A 22-year-old man comes to the emergency department due to sudden-onset pain and stiffness on one side of his neck. He was diagnosed with a psychiatric disorder 2 days ago and has been adherent with his newly prescribed medication. For the past few months, the patient has heard voices telling him to quit his job, and he believes that his girlfriend's parents are monitoring his sexual thoughts with a special device. He has been socially withdrawn and has difficulty showering regularly. Vital signs are within normal limits. The head is tilted to one side and cannot be straightened without considerable pain. The most likely cause of this patient's symptoms is antagonism of which of the following receptors?

A. Alpha-1 adrenergic (0%)
✓ B. Dopaminergic D2 (75%)
C. GABA-A (8%)
D. Histaminergic H1 (0%)
E. Muscarinic M1 (6%)
F. Serotonergic 5-HT2A (7%)

Omitted
Correct answer
B

75%
Answered correctly

01 sec
Time Spent

06/05/2020
Last Updated

Explanation

This patient is experiencing an **acute dystonic reaction** (ie, spasmodic torticollis), a type of extrapyramidal symptom (EPS) most likely due to recent initiation of **antipsychotic medication**. Acute dystonia can develop abruptly anytime between 4 hours and 4 days after receiving an antipsychotic medication. The condition is characterized by a sudden, involuntary contraction of a major muscle group. Other examples of acute dystonia include oculogyric crisis (forced, sustained elevation of the eyes in an upward position), opisthotonus (arching of the back with the head

This patient is experiencing an **acute dystonic reaction** (ie, spasmodic torticollis), a type of extrapyramidal symptom (EPS) most likely due to recent initiation of **antipsychotic medication**. Acute dystonia can develop abruptly anytime between 4 hours and 4 days after receiving an antipsychotic medication. The condition is characterized by a sudden, involuntary contraction of a major muscle group. Other examples of acute dystonia include oculogyric crisis (forced, sustained elevation of the eyes in an upward position), opisthotonus (arching of the back with the head thrown backward), and, rarely, laryngospasm. The risk is highest with high-potency, first-generation antipsychotics (eg, haloperidol, fluphenazine).

Acute dystonic reactions are theorized to result from the antipsychotic property of **D2 antagonism** in the **nigrostriatal pathway**. In the striatum, the inhibitory effects of dopaminergic neurons (D2) are normally balanced by the excitatory actions of muscarinic cholinergic neurons (M1). Strong dopaminergic blockade causes an excess of cholinergic activity, resulting in extrapyramidal side effects (eg, acute dystonic reactions, akathisia, parkinsonism). Medications with M1 receptor antagonist properties, such as benztropine or the antihistamine diphenhydramine, help re-establish the dopaminergic-cholinergic balance and effectively treat acute dystonia.

(Choice A) Blockade of alpha-1 adrenergic receptors causes orthostatic hypotension and dizziness.

(Choice C) Flumazenil, a benzodiazepine GABA-A receptor antagonist, can be used to treat benzodiazepine overdose. However, it may precipitate withdrawal seizures in patients with chronic benzodiazepine use.

(Choice D) Antagonism of central histamine H1 receptors causes sedation and weight gain.

(Choice E) Antagonism of muscarinic receptors causes anticholinergic side effects (eg, confusion, dry mouth, urinary retention). Low-potency antipsychotics (eg, chlorpromazine, thioridazine) are more likely to cause these effects due to their strong blockade of central and peripheral muscarinic cholinergic receptors.

(Choice F) Second-generation antipsychotics antagonize serotonergic 5-HT2A, but this does not typically cause dystonia.

Educational objective:
Acute extrapyramidal symptoms (eg, dystonia, akathisia, parkinsonism) are due to D2 blockade in the nigrostriatal pathway. First-generation, high-potency antipsychotics (eg, haloperidol, fluphenazine) strongly block D2 receptors and are most likely to cause extrapyramidal symptoms.

References

- Second-generation antipsychotics and extrapyramidal adverse effects.

thrown backward), and, rarely, laryngospasm. The risk is highest with high-potency, first-generation antipsychotics (eg, haloperidol, fluphenazine).

Acute dystonic reactions are theorized to result from the antipsychotic property of **D2 antagonism** in the **nigrostriatal pathway**. In the striatum, the inhibitory effects of dopaminergic neurons (D2) are normally balanced by the excitatory actions of muscarinic cholinergic neurons (M1). Strong dopaminergic blockade causes an excess of cholinergic activity, resulting in extrapyramidal side effects (eg, acute dystonic reactions, akathisia, parkinsonism). Medications with M1 receptor antagonist properties, such as benztropine or the antihistamine diphenhydramine, help re-establish the dopaminergic-cholinergic balance and effectively treat acute dystonia.

(Choice A) Blockade of alpha-1 adrenergic receptors causes orthostatic hypotension and dizziness.

(Choice C) Flumazenil, a benzodiazepine GABA-A receptor antagonist, can be used to treat benzodiazepine overdose. However, it may precipitate withdrawal seizures in patients with chronic benzodiazepine use.

(Choice D) Antagonism of central histamine H1 receptors causes sedation and weight gain.

(Choice E) Antagonism of muscarinic receptors causes anticholinergic side effects (eg, confusion, dry mouth, urinary retention). Low-potency antipsychotics (eg, chlorpromazine, thioridazine) are more likely to cause these effects due to their strong blockade of central and peripheral muscarinic cholinergic receptors.

(Choice F) Second-generation antipsychotics antagonize serotonergic 5-HT2A, but this does not typically cause dystonia.

Educational objective:
Acute extrapyramidal symptoms (eg, dystonia, akathisia, parkinsonism) are due to D2 blockade in the nigrostriatal pathway. First-generation, high-potency antipsychotics (eg, haloperidol, fluphenazine) strongly block D2 receptors and are most likely to cause extrapyramidal symptoms.

References

- Second-generation antipsychotics and extrapyramidal adverse effects.

Behavioral science	Nervous System	Torticollis
Subject	System	Topic

Copyright © UWorld. All rights reserved.

A 72-year-old man is hospitalized for acute exacerbation of congestive heart failure. His other medical problems include hypertension, coronary artery disease, peripheral vascular disease, hypercholesterolemia, prostate cancer, and mild neurocognitive disorder. The patient is stabilized medically and discharged home to live with his daughter, who has supervised his medications in the past. A week later, he is rehospitalized with recurrent heart failure exacerbation. The patient thinks he took his medications appropriately since being discharged, but a pill count shows that he did not take the majority of his prescribed drugs. The daughter is contacted and says she organizes his pills daily and explains which medications he needs to take before leaving for work. Which of the following interventions would likely have prevented this outcome?

A. Discharge checklist

B. Involvement of a social worker in discharge planning

C. Mini-mental state examination

D. Patient education

E. Simplification of medication dosing schedule

Submit

A 72-year-old man is hospitalized for acute exacerbation of congestive heart failure. His other medical problems include hypertension, coronary artery disease, peripheral vascular disease, hypercholesterolemia, prostate cancer, and mild neurocognitive disorder. The patient is stabilized medically and discharged home to live with his daughter, who has supervised his medications in the past. A week later, he is rehospitalized with recurrent heart failure exacerbation. The patient thinks he took his medications appropriately since being discharged, but a pill count shows that he did not take the majority of his prescribed drugs. The daughter is contacted and says she organizes his pills daily and explains which medications he needs to take before leaving for work. Which of the following interventions would likely have prevented this outcome?

- A. Discharge checklist (19%)
- ✓ B. Involvement of a social worker in discharge planning (28%)
- C. Mini-mental state examination (11%)
- D. Patient education (7%)
- E. Simplification of medication dosing schedule (32%)

Omitted
Correct answer
B

28%
Answered correctly

01 sec
Time Spent

01/28/2020
Last Updated

Explanation

This patient's relapse and rehospitalization are most likely due to his poor medication adherence, which likely stems from cognitive impairment. Although his daughter has supervised his medications in the past, it is imperative that she be consulted prior to discharge to ensure that she is still willing and capable of doing so. During the hospitalization, a social worker can contact or meet with involved family members and assess whether there are any social factors affecting the patient's ability to return home. In this case, speaking with the daughter earlier may have allowed the

This patient's relapse and rehospitalization are most likely due to his poor medication adherence, which likely stems from cognitive impairment. Although his daughter has supervised his medications in the past, it is imperative that she be consulted prior to discharge to ensure that she is still willing and capable of doing so. During the hospitalization, a social worker can contact or meet with involved family members and assess whether there are any social factors affecting the patient's ability to return home. In this case, speaking with the daughter earlier may have allowed the health care team to identify a potential barrier to adherence (ie, the daughter's job) and develop an alternate strategy. Effective discharge planning entails interdisciplinary collaboration among the social worker, nurse, and physician. Issues to consider include the patient's cognitive status, activity and functional status, availability of family support, transportation to follow-up visits, potential safety issues in the home (eg, stairways), and ability to obtain and take medications. To be discharged home, a patient (with help from a family member or caregiver if necessary) should be able to take medications correctly, perform self-care, eat appropriately, and attend follow-up appointments.

(Choices A and D) A discharge checklist and patient education are important components of the discharge process and help facilitate the transition to outpatient care. However, this patient's ability to retain the information and follow a checklist is questionable due to his cognitive impairment.

(Choice C) A mini-mental state examination is a 30-item assessment that provides a screening of cognitive function. It would not assist in determining functional status (ie, whether the patient can administer his own medication or requires supervision).

(Choice E) Simplifying the dosing schedule, when possible, can help improve medication adherence. However, this patient has a history of requiring supervision to take his medication, and it is more important to ensure that he will be adequately supervised on discharge.

Educational objective:
Effective discharge planning requires collaboration of multiple disciplines (physician, nurse, social worker). A social worker can be instrumental in assessing whether the patient has adequate family or caregiver support at home.

References

- Hospital discharge planning for frail older people and their family. Are we delivering best practice? A review of the evidence.
- Discharge planning from hospital to home.

Behavioral science Miscellaneous (Multisystem) Treatment adherence

A 62-year-old man comes to the office with his wife for evaluation of episodic chest pain. The physician introduces herself to the patient and his wife and confirms that he is comfortable and not experiencing any current pain. The patient's wife begins the conversation by saying, "He brought a list of his medications for you to review, but I'm not sure he takes all of them regularly." After thanking them for bringing the list, which of the following is the most appropriate way for the physician to initiate the medical interview?

A. "Have you had trouble remembering to take your medications?"

B. "How will your pain improve if you don't take your medications?"

C. "May I ask your wife to leave for this part of the evaluation?"

D. "What do your episodes of chest pain feel like?"

E. "Why do you think you have difficulties taking your medications regularly?"

Submit

A 62-year-old man comes to the office with his wife for evaluation of episodic chest pain. The physician introduces herself to the patient and his wife and confirms that he is comfortable and not experiencing any current pain. The patient's wife begins the conversation by saying, "He brought a list of his medications for you to review, but I'm not sure he takes all of them regularly." After thanking them for bringing the list, which of the following is the most appropriate way for the physician to initiate the medical interview?

A. "Have you had trouble remembering to take your medications?" (15%)

B. "How will your pain improve if you don't take your medications?" (0%)

C. "May I ask your wife to leave for this part of the evaluation?" (21%)

✓ D. "What do your episodes of chest pain feel like?" (44%)

E. "Why do you think you have difficulties taking your medications regularly?" (18%)

Omitted
Correct answer
D

44%
Answered correctly

02 secs
Time Spent

04/09/2020
Last Updated

Explanation

Patient-centered care requires communication skills that engage the patient in discussing his or her perspective of the illness, which helps build rapport and aids in acquiring a more complete history. In this scenario, the wife begins the conversation by expressing her concern about the patient's medication adherence. Although acquiring collateral information can be important, the best approach is to **redirect the conversation back to the patient** to first elicit his perspective and concerns. It is better to explore medication adherence once rapport has already been established.

Medical interviewing is best initiated with an **open-ended question**. This invites the patient to describe their condition in their own words and

Patient-centered care requires communication skills that engage the patient in discussing his or her perspective of the illness, which helps build rapport and aids in acquiring a more complete history. In this scenario, the wife begins the conversation by expressing her concern about the patient's medication adherence. Although acquiring collateral information can be important, the best approach is to **redirect the conversation back to the patient** to first elicit his perspective and concerns. It is better to explore medication adherence once rapport has already been established.

Medical interviewing is best initiated with an **open-ended question**. This invites the patient to describe their condition in their own words and gives the physician insight into the patient's major concerns, which can be addressed with more specific questions later in the interview. Examples of open-ended questions include: "What brings you in today?" and "What is that like for you?" In contrast, a closed-ended question requires only a yes/no response and does not encourage conversation/exploration.

(Choices A, B, and E) Although the wife has alerted the physician to a potentially important issue (possible medication nonadherence), it would be inappropriate to begin a medical interview with questions that assume (without asking) that the patient is, in fact, not taking his medication and focus on the wife's concerns rather than the patient's. This may put the patient on the defensive, leading to a deterioration of the physician-patient relationship. In addition, asking the patient if he is having trouble with remembering his medications is an example of a yes/no, closed-ended question.

(Choice C) Although patients should be given the opportunity to speak to the physician alone, this question suggests the wife should leave. It is preferable to ask the patient if he would like her to stay or leave.

Educational objective:
Patient-centered medical interviewing should focus on the patient's perspective of the illness. Interviews are best initiated with an open-ended question that elicits the patient's major concerns in the patient's own words.

References

- Patient-centered communication: basic skills.

Behavioral science	General Principles	Interviewing Technique
Subject	System	Topic

A 35-year-old man is admitted to the hospital after sustaining multiple injuries in a motor vehicle accident. He undergoes surgery for an open fracture of the tibia and a spiral fracture of the humerus. The tibial repair is successful, but the surgeon operates on the wrong arm. Which of the following procedures would be most effective in preventing a similar error?

A. Confirm the correct site with the patient

B. Have the anesthesiologist and surgeon verify the surgical site together

C. Have the head nurse verify the surgical site

D. Have the nurse and surgeon verify the surgical site independently

E. Have the operating physician verify the surgical site

Submit

A 35-year-old man is admitted to the hospital after sustaining multiple injuries in a motor vehicle accident. He undergoes surgery for an open fracture of the tibia and a spiral fracture of the humerus. The tibial repair is successful, but the surgeon operates on the wrong arm. Which of the following procedures would be most effective in preventing a similar error?

A. Confirm the correct site with the patient (21%)

B. Have the anesthesiologist and surgeon verify the surgical site together (12%)

C. Have the head nurse verify the surgical site (1%)

✓ D. Have the nurse and surgeon verify the surgical site independently (52%)

E. Have the operating physician verify the surgical site (11%)

Omitted
Correct answer
D

52%
Answered correctly

01 sec
Time Spent

07/03/2020
Last Updated

Explanation

According to The Joint Commission's sentinel event statistics, wrong-site surgery is the most frequently reported serious adverse event. Emergency operations, failure to mark the surgical site, poor communication, and surgeon fatigue are contributing factors. As in this case, multiple procedures on the same patient and multiple surgeons will also increase the risk of operating at the wrong site. Therefore, a preoperative verification process is important to decrease this risk. In addition to marking the operative site, **independent verification** of the patient, procedure, and site by 2 health care workers (eg, a nurse and physician) should be performed. The "dual identifiers" must perform the verification independently because 2 clinicians verifying identifiers together can result in replicating an error. The Joint Commission recommends use of a "surgical timeout" immediately prior to the procedure in order to conduct a final verification of the patient, procedure, and site.

Explanation

According to The Joint Commission's sentinel event statistics, wrong-site surgery is the most frequently reported serious adverse event. Emergency operations, failure to mark the surgical site, poor communication, and surgeon fatigue are contributing factors. As in this case, multiple procedures on the same patient and multiple surgeons will also increase the risk of operating at the wrong site. Therefore, a preoperative verification process is important to decrease this risk. In addition to marking the operative site, **independent verification** of the patient, procedure, and site by 2 health care workers (eg, a nurse and physician) should be performed. The "dual identifiers" must perform the verification independently because 2 clinicians verifying identifiers together can result in replicating an error. The Joint Commission recommends use of a "surgical timeout" immediately prior to the procedure in order to conduct a final verification of the patient, procedure, and site.

(Choice A) Although an awake and aware patient can participate in the verification process, this is not an adequate substitute for dual independent clinician identification.

(Choice B) Having these 2 clinicians verify the site together is not optimal as it increases the risk that they will replicate the error.

(Choices C and E) Two independent identifiers are preferred.

Educational objective:
Risk of wrong-site surgery can be reduced by requiring "dual identifiers" (usually a nurse and physician) to independently confirm that they have the correct patient, site, and procedure. Checks must be truly independent to ensure patient safety.

References

- Using "near misses" analysis to prevent wrong-site surgery.

Behavioral science	General Principles	Medical errors
Subject	System	Topic

Copyright © UWorld. All rights reserved.

A 38-year-old recently homeless woman and her 35-year-old boyfriend come to a community clinic seeking care for her pregnancy at 27 weeks. She also brings her 19-year-old son, who has cerebral palsy and has not had consistent medical care. The patient explains to the social worker that the family was recently evicted from their apartment for failure to pay rent after her boyfriend lost his job. Which of these individuals is eligible for Medicare coverage?

A. The woman
B. The woman's boyfriend
C. The woman's child when it is born
D. The woman's disabled son
E. The woman, her boyfriend, and her son

Submit

A 38-year-old recently homeless woman and her 35-year-old boyfriend come to a community clinic seeking care for her pregnancy at 27 weeks. She also brings her 19-year-old son, who has cerebral palsy and has not had consistent medical care. The patient explains to the social worker that the family was recently evicted from their apartment for failure to pay rent after her boyfriend lost his job. Which of these individuals is eligible for Medicare coverage?

A. The woman (6%)

B. The woman's boyfriend (1%)

C. The woman's child when it is born (4%)

✓ D. The woman's disabled son (68%)

E. The woman, her boyfriend, and her son (19%)

Omitted
Correct answer
D

68%
Answered correctly

02 secs
Time Spent

02/17/2020
Last Updated

Explanation

Medicare is a federal socialized medical insurance program that covers select individuals. It provides health insurance for patients age 65 and older who have worked and paid into the system (ie, have paid taxes). Individuals must also hold residence and citizenship in the United States. Medicare also covers younger individuals with disabilities, end-stage renal disease, or amyotrophic lateral sclerosis. Medicare consists of several parts, with Part A covering inpatient hospital visits, Part B covering a select number of outpatient services and medical devices, Part C as an optional capitated plan with additional benefits (vision, dental), and Part D as an optional prescription drug plan. Medicare is different from Medicaid, a state-run medical insurance program that covers the homeless, undocumented immigrants, pregnant women, and low-income

Omitted
Correct answer
D

68%
Answered correctly

02 secs
Time Spent

02/17/2020
Last Updated

Explanation

Medicare is a federal socialized medical insurance program that covers select individuals. It provides health insurance for patients age 65 and older who have worked and paid into the system (ie, have paid taxes). Individuals must also hold residence and citizenship in the United States. Medicare also covers younger individuals with disabilities, end-stage renal disease, or amyotrophic lateral sclerosis. Medicare consists of several parts, with Part A covering inpatient hospital visits, Part B covering a select number of outpatient services and medical devices, Part C as an optional capitated plan with additional benefits (vision, dental), and Part D as an optional prescription drug plan. Medicare is different from Medicaid, a state-run medical insurance program that covers the homeless, undocumented immigrants, pregnant women, and low-income families.

In this situation, only the disabled son would be eligible for Medicare.

(Choices A, B, C, and E) The pregnant woman, her boyfriend, and the child (when born) can be covered by Medicaid only, not Medicare.

Educational objective:
Medicare is a federal socialized medical insurance program that covers individuals age 65 and older who have a work history and younger individuals with disabilities.

References

- Special issues for younger Medicare beneficiaries with disabilities.

Behavioral science	Miscellaneous (Multisystem)	Health insurance
Subject	System	Topic

Copyright © UWorld. All rights reserved.

A 49-year-old woman comes to the office due to worsening hot flashes and night sweats over the past year. The patient's menstrual periods have been irregular for the past 2 years, and her last menstrual cycle was a year ago. She has no chronic medical conditions and has had no surgeries. BMI is 23 kg/m^2. Vital signs are normal. The neck is supple and without thyromegaly. The remainder of the examination is normal. The patient says, "This is awful. I turn red and sweat in the middle of work meetings and then have to leave to cool down. I'm wondering if hormones could help." Which of the following is the most appropriate response to this patient?

A. "Although menopause can be uncomfortable, it is a natural process; let's try making some simple lifestyle changes first."

B. "Hot flashes and sweating are very normal in menopause; for most women, they subside on their own in 1-2 years without treatment."

C. "I can see these symptoms have been affecting your day-to-day life; hormonal therapy can be an effective option, although there are some risks."

D. "I don't recommend taking hormonal therapy because your symptoms are not that severe; the risks would likely outweigh the benefits."

E. "Menopause can be very stressful; perhaps talking about how to cope with the emotional effects would be helpful."

Submit

A 49-year-old woman comes to the office due to worsening hot flashes and night sweats over the past year. The patient's menstrual periods have been irregular for the past 2 years, and her last menstrual cycle was a year ago. She has no chronic medical conditions and has had no surgeries. BMI is 23 kg/m^2. Vital signs are normal. The neck is supple and without thyromegaly. The remainder of the examination is normal. The patient says, "This is awful. I turn red and sweat in the middle of work meetings and then have to leave to cool down. I'm wondering if hormones could help." Which of the following is the most appropriate response to this patient?

A. "Although menopause can be uncomfortable, it is a natural process; let's try making some simple lifestyle changes first." (4%)

B. "Hot flashes and sweating are very normal in menopause; for most women, they subside on their own in 1-2 years without treatment." (2%)

✓ C. "I can see these symptoms have been affecting your day-to-day life; hormonal therapy can be an effective option, although there are some risks." (90%)

D. "I don't recommend taking hormonal therapy because your symptoms are not that severe; the risks would likely outweigh the benefits." (0%)

E. "Menopause can be very stressful; perhaps talking about how to cope with the emotional effects would be helpful." (2%)

Omitted
Correct answer
C

90%
Answered correctly

02 secs
Time Spent

05/28/2020
Last Updated

Explanation

Patient-centered care involves being responsive to the patient's expressed concerns and providing necessary information to assist the patient in making an informed health care decision. The risks and benefits of hormone therapy for menopausal symptoms is a complex topic that requires an individualized approach, taking into account the patient's age, severity of symptoms, and calculated risks for breast cancer and cardiovascular

Patient-centered care involves being responsive to the patient's expressed concerns and providing necessary information to assist the patient in making an informed health care decision. The risks and benefits of hormone therapy for menopausal symptoms is a complex topic that requires an individualized approach, taking into account the patient's age, severity of symptoms, and calculated risks for breast cancer and cardiovascular disease. Strategies for effective communication include **acknowledging** the **patient's discomfort** and **educating** the patient about the **benefits and risks** and alternate strategies. The emphasis should be on **sharing decision-making**, respecting patient preferences, and avoiding premature judgments.

In this case, the patient has expressed significant distress and has specifically asked if hormone therapy can alleviate her discomfort. The most appropriate response is to acknowledge the impact of the patient's vasomotor symptoms and begin a discussion of the risks and benefits of hormonal treatment in language that the patient can understand.

(Choice A) This response fails to promote shared decision-making by dismissing the patient's inquiry about hormone therapy. The patient should be educated about the benefits and risks of hormone therapy so that she can make an informed medical decision.

(Choice B) This patient has come to the physician with the expectation that her discomfort can be alleviated. This response both minimizes the patient's discomfort and offers no relief. The patient will likely feel that her concerns have not been addressed, negatively impacting the patient-physician relationship.

(Choice D) This response makes a judgment about the patient's level of discomfort and inappropriately makes the decision for her without conducting an informed consent discussion about the risks and benefits.

(Choice E) Although discussing coping strategies can be helpful, this response redirects the conversation and ignores the patient's question regarding hormone therapy.

Educational objective:
Patient-centered care involves being responsive to the patient's expressed concerns and providing necessary information to assist the patient in making an informed health care decision. The emphasis should be on shared decision-making, taking into account the patient's preferences and avoiding premature judgments.

References

- Cardiovascular risk/benefit profile of MHT.

premature judgments.

In this case, the patient has expressed significant distress and has specifically asked if hormone therapy can alleviate her discomfort. The most appropriate response is to acknowledge the impact of the patient's vasomotor symptoms and begin a discussion of the risks and benefits of hormonal treatment in language that the patient can understand.

(Choice A) This response fails to promote shared decision-making by dismissing the patient's inquiry about hormone therapy. The patient should be educated about the benefits and risks of hormone therapy so that she can make an informed medical decision.

(Choice B) This patient has come to the physician with the expectation that her discomfort can be alleviated. This response both minimizes the patient's discomfort and offers no relief. The patient will likely feel that her concerns have not been addressed, negatively impacting the patient-physician relationship.

(Choice D) This response makes a judgment about the patient's level of discomfort and inappropriately makes the decision for her without conducting an informed consent discussion about the risks and benefits.

(Choice E) Although discussing coping strategies can be helpful, this response redirects the conversation and ignores the patient's question regarding hormone therapy.

Educational objective:
Patient-centered care involves being responsive to the patient's expressed concerns and providing necessary information to assist the patient in making an informed health care decision. The emphasis should be on shared decision-making, taking into account the patient's preferences and avoiding premature judgments.

References

- Cardiovascular risk/benefit profile of MHT.

Behavioral science	Female Reproductive System & Breast	Menopause
Subject	System	Topic

Copyright © UWorld. All rights reserved.

A frail, 93-year-old woman with mild dementia enters a nursing home due to difficulty managing on her own. She has recently had several falls, including one during the night while getting out of bed to use the bathroom. The patient attributes this fall to "clumsiness." Syncope workup is unremarkable for any abnormalities. She has a medical history of hypertension, osteoarthritis, depression, and anxiety. Her medications include amlodipine, sertraline, aripiprazole, and amitriptyline. Which of the following is the most effective strategy for decreasing this patient's fall risk?

A. Bed rails

B. Cane

C. Medication review

D. Soft restraints

E. Walker

Submit

A frail, 93-year-old woman with mild dementia enters a nursing home due to difficulty managing on her own. She has recently had several falls, including one during the night while getting out of bed to use the bathroom. The patient attributes this fall to "clumsiness." Syncope workup is unremarkable for any abnormalities. She has a medical history of hypertension, osteoarthritis, depression, and anxiety. Her medications include amlodipine, sertraline, aripiprazole, and amitriptyline. Which of the following is the most effective strategy for decreasing this patient's fall risk?

- A. Bed rails (3%)
- B. Cane (0%)
- ✓ C. Medication review (79%)
- D. Soft restraints (0%)
- E. Walker (15%)

Omitted
Correct answer
C

79%
Answered correctly

02 secs
Time Spent

03/04/2020
Last Updated

Explanation

This patient has multiple risk factors for falls, including **advanced age**, arthritis, prior history of falls, cognitive impairment, and use of **multiple medications** associated with **increased risk of falling** (ie, psychotropic and cardiovascular drugs). Medication use is one of the most **modifiable** risk factors for falls.

Psychotropic drugs, including antipsychotics such as aripiprazole; antidepressants, such as sertraline and amitriptyline; and benzodiazepines are most commonly associated with increased fall risk. **Cardiovascular drugs** that reduce circulating blood volume or blood pressure such as calcium channel blockers (eg, amlodipine), beta blockers, and diuretics are also associated with falls. The patient should undergo a **medication**

This patient has multiple risk factors for falls, including **advanced age**, arthritis, prior history of falls, cognitive impairment, and use of **multiple medications** associated with **increased risk of falling** (ie, psychotropic and cardiovascular drugs). Medication use is one of the most **modifiable** risk factors for falls.

Psychotropic drugs, including antipsychotics such as aripiprazole; antidepressants, such as sertraline and amitriptyline; and benzodiazepines are most commonly associated with increased fall risk. **Cardiovascular drugs** that reduce circulating blood volume or blood pressure such as calcium channel blockers (eg, amlodipine), beta blockers, and diuretics are also associated with falls. The patient should undergo a **medication review** with the goal of finding the lowest effective dose, eliminating unnecessary medications, and/or switching to those associated with a lower fall risk.

(Choices A and D) Bed rails and soft physical restraints have not been shown to reduce falls in long-term care facilities. Some studies indicate a slightly increased risk of falls and injury in nursing home patients who are physically restrained.

(Choices B and E) Assistive devices such as canes and walkers are often used to improve mobility in patients with gait or balance disturbances. However, there is a lack of evidence regarding their efficacy in preventing falls (they may impair compensatory stepping reactions that help with balance recovery).

Educational objective:
Falls are a common problem in elderly nursing home patients. Optimal management includes a careful medication review with the goal of limiting the use of agents associated with increased fall risk.

References

- Medication-related falls in the elderly: causative factors and preventive strategies.
- Medication-related falls in the elderly: mechanisms and prevention strategies.

Behavioral science	Miscellaneous (Multisystem)	Polypharmacy
Subject	System	Topic

Copyright © UWorld. All rights reserved.

A 70-year-old woman comes to the physician for a new patient visit. She reports intermittent headaches and poor sleep. During review of systems, she also describes a sensation of incomplete emptying of the bladder and constipation. The patient has a history of migraines and chronic insomnia. Her other medical problems include hypercholesterolemia and osteoarthritis. Her medications include amitriptyline prescribed for migraines, simvastatin, diclofenac, and over-the-counter diphenhydramine for insomnia. Which of the following is the most appropriate next step in management of this patient?

- A. Add topiramate for additional migraine prophylaxis
- B. Add zolpidem to treat insomnia
- C. Cystography
- D. Discontinue diphenhydramine
- E. Head CT scan
- F. Increase dose of amitriptyline

Submit

A 70-year-old woman comes to the physician for a new patient visit. She reports intermittent headaches and poor sleep. During review of systems, she also describes a sensation of incomplete emptying of the bladder and constipation. The patient has a history of migraines and chronic insomnia. Her other medical problems include hypercholesterolemia and osteoarthritis. Her medications include amitriptyline prescribed for migraines, simvastatin, diclofenac, and over-the-counter diphenhydramine for insomnia. Which of the following is the most appropriate next step in management of this patient?

- A. Add topiramate for additional migraine prophylaxis (1%)
- B. Add zolpidem to treat insomnia (4%)
- C. Cystography (6%)
- ✓ D. Discontinue diphenhydramine (74%)
- E. Head CT scan (10%)
- F. Increase dose of amitriptyline (1%)

Omitted
Correct answer
D

74%
Answered correctly

01 sec
Time Spent

01/12/2020
Last Updated

Explanation

New patient visits should always include a thorough review of current medications (including over-the-counter medications) to determine if any are inappropriate and/or causing adverse effects or problematic drug-drug interactions. The risk of adverse drug events increases with the number of medications, and minimizing the use of non-essential medications can reduce the risk of an adverse event. This patient is likely experiencing anticholinergic side effects (ie, urinary retention, constipation) due to the combined anticholinergic effects of amitriptyline and diphenhydramine.

New patient visits should always include a thorough review of current medications (including over-the-counter medications) to determine if any are inappropriate and/or causing adverse effects or problematic drug-drug interactions. The risk of adverse drug events increases with the number of medications, and minimizing the use of non-essential medications can reduce the risk of an adverse event. This patient is likely experiencing anticholinergic side effects (ie, urinary retention, constipation) due to the combined anticholinergic effects of amitriptyline and diphenhydramine. Anticholinergic side effects are particularly common in older adults and can also include impaired memory, confusion, hallucinations, dry mouth, blurry vision, impaired sweating, tachycardia, and increased risk for falls. Physicians should prioritize discontinuing unnecessary medications prior to pursuing further workup or adding additional medications for chronic problems. In this case, diphenhydramine should be discontinued as it is highly anticholinergic and has not helped with the patient's chronic insomnia.

(Choice A) Although topiramate can be considered for migraine prevention, discontinuing unnecessary medication that is causing adverse effects takes priority.

(Choice B) Zolpidem is a pharmacological treatment option for insomnia but should not be added to the patient's regimen as it has adverse effects in older adults, including increased risk of falls and confusion. Non-pharmacological strategies (eg, cognitive behavioral therapy) are preferred for initial management of primary insomnia in older adults.

(Choices C and E) Cystography is not indicated as this patient's urinary retention is more likely due to anticholinergic side effects. A head CT scan would be extremely low yield in this patient with chronic headaches.

(Choice F) Increasing the dose of amitriptyline would likely exacerbate the patient's anticholinergic side effects.

Educational objective:
Review of medications to determine if any are unnecessary or causing adverse effects is essential in providing high-quality patient care. The cumulative anticholinergic burden of multiple medications is especially problematic in the elderly.

References

- Minimizing inappropriate medications in older populations: a 10-step conceptual framework.
- Anticholinergic activity of 107 medications commonly used by older adults.
- American Geriatrics Society updated Beers Criteria for potentially inappropriate medication use in older adults.

A 78-year-old man comes to the office for a regularly scheduled review of his chronic medical problems. The patient has hypertension, coronary artery disease, and type 2 diabetes mellitus, for which he takes metformin, atorvastatin, lisinopril, and nitroglycerin as needed for chest pain. He takes his medications as prescribed and follows diet and exercise instructions. During the discussion, he hesitates, laughs nervously, and says, "I can't get an erection anymore, and my wife says I have to ask you about getting the 'blue pill.'" Which of the following is the most appropriate response to this patient's concern?

A. "I can see that you feel uncomfortable talking about this. It can be a sensitive subject for some men."

B. "I can understand your concern, but at your age, we hesitate to start too many medications."

C. "Medications for erectile dysfunction have significant side effects. I would not pursue them unless you feel it is important."

D. "This is a very common problem for men as they age. It is good that you mentioned it."

E. "We can try medication for erectile dysfunction, but it may not be effective at your age."

Submit

A 78-year-old man comes to the office for a regularly scheduled review of his chronic medical problems. The patient has hypertension, coronary artery disease, and type 2 diabetes mellitus, for which he takes metformin, atorvastatin, lisinopril, and nitroglycerin as needed for chest pain. He takes his medications as prescribed and follows diet and exercise instructions. During the discussion, he hesitates, laughs nervously, and says, "I can't get an erection anymore, and my wife says I have to ask you about getting the 'blue pill.'" Which of the following is the most appropriate response to this patient's concern?

A. "I can see that you feel uncomfortable talking about this. It can be a sensitive subject for some men." (18%)

B. "I can understand your concern, but at your age, we hesitate to start too many medications." (2%)

C. "Medications for erectile dysfunction have significant side effects. I would not pursue them unless you feel it is important." (5%)

✓ D. "This is a very common problem for men as they age. It is good that you mentioned it." (73%)

E. "We can try medication for erectile dysfunction, but it may not be effective at your age." (0%)

Omitted
Correct answer
D

73%
Answered correctly

01 sec
Time Spent

05/26/2020
Last Updated

Explanation

Discussing sexuality with older patients	
Empathy & reassurance	• Sexuality is a normal & appropriate topic of discussion at any age. • Sexual problems are common in the elderly. • Clinician is willing to work with the patient as appropriate.

Explanation

Discussing sexuality with older patients	
Empathy & reassurance	• Sexuality is a normal & appropriate topic of discussion at any age. • Sexual problems are common in the elderly. • Clinician is willing to work with the patient as appropriate.
Patient-centered education	• Allow the patient to set priorities & subject boundaries. • Use appropriate vocabulary (avoid medical jargon & euphemisms). • Be aware of comorbidities & concurrent medications.

Sexual dysfunction is common in older individuals due to comorbid conditions, medication effects, and in women, menopausal changes. This patient is experiencing difficulty with sexual intercourse, and his hesitation in discussing it suggests that he feels awkward in bringing up the subject.

In counseling a patient on a potentially **sensitive subject** such as sexuality, the first objective is **making the patient feel comfortable**. The clinician should discuss the topic objectively, as with any other medical topic, and avoid giving the impression that the subject of sex is "dirty" or inappropriate. It is generally best to use the same terms the patient uses for bodily functions but otherwise avoid euphemisms. In this particular case, the clinician should begin the conversation by reassuring the patient that sexual dysfunction is **common** and is a perfectly **appropriate subject of discussion** between a patient and a physician.

(Choice A) The patient already appears to feel nervous discussing the subject of sexuality. This statement conveys empathy but reiterates and draws attention to his anxiety and may reinforce his feelings of awkwardness.

(Choices B and E) The patient takes a medication (ie, nitrates) that makes phosphodiesterase inhibitors (eg, sildenafil, sometimes referred to colloquially as "the blue pill") contraindicated. Although the use of phosphodiesterase inhibitors is often complicated in patients with cardiovascular disease, age itself is not a contraindication.

(Choice C) Patients are unlikely to bring up a sensitive subject, such as sexuality, if they do not consider it important. This statement may make the patient feel even more uncomfortable in having to justify raising the concern.

education	• Use appropriate vocabulary (avoid medical jargon & euphemisms). • Be aware of comorbidities & concurrent medications.

Sexual dysfunction is common in older individuals due to comorbid conditions, medication effects, and in women, menopausal changes. This patient is experiencing difficulty with sexual intercourse, and his hesitation in discussing it suggests that he feels awkward in bringing up the subject.

In counseling a patient on a potentially **sensitive subject** such as sexuality, the first objective is **making the patient feel comfortable**. The clinician should discuss the topic objectively, as with any other medical topic, and avoid giving the impression that the subject of sex is "dirty" or inappropriate. It is generally best to use the same terms the patient uses for bodily functions but otherwise avoid euphemisms. In this particular case, the clinician should begin the conversation by reassuring the patient that sexual dysfunction is **common** and is a perfectly **appropriate subject of discussion** between a patient and a physician.

(Choice A) The patient already appears to feel nervous discussing the subject of sexuality. This statement conveys empathy but reiterates and draws attention to his anxiety and may reinforce his feelings of awkwardness.

(Choices B and E) The patient takes a medication (ie, nitrates) that makes phosphodiesterase inhibitors (eg, sildenafil, sometimes referred to colloquially as "the blue pill") contraindicated. Although the use of phosphodiesterase inhibitors is often complicated in patients with cardiovascular disease, age itself is not a contraindication.

(Choice C) Patients are unlikely to bring up a sensitive subject, such as sexuality, if they do not consider it important. This statement may make the patient feel even more uncomfortable in having to justify raising the concern.

Educational objective:
Sexual dysfunction is common in older individuals due to comorbid conditions, medication effects, and in women, menopausal changes. When counseling patients on sexuality, the clinician should attempt to make them feel comfortable and reassure them that sexual dysfunction is common and is an appropriate subject of discussion between a patient and a physician.

Behavioral science	Male Reproductive System	Male sexual dysfunction
Subject	System	Topic

Copyright © UWorld. All rights reserved.

A 46-year-old man is hospitalized with diabetic ketoacidosis. He is administered intravenous fluids and an insulin drip, and laboratory testing is ordered. In the morning, the on-call physician hands off the patient to the day shift physician, who arrives an hour late due to an emergency at his nighttime moonlighting job. The handoff information includes the status of the patient and instructions to check electrolytes and calculate his anion gap. The physician performs inpatient rounds and then sees his usual clinic outpatients in the afternoon, but he neglects to check the patient's anion gap. The patient subsequently develops worsening acidosis requiring intubation for respiratory distress. Which of the following is the most likely cause of this adverse outcome?

- A. Deficiency of knowledge
- B. Excessive patient caseload
- C. Inadequate patient handoff
- D. Judgment error
- E. Physician burnout
- F. Physician fatigue

Submit

A 46-year-old man is hospitalized with diabetic ketoacidosis. He is administered intravenous fluids and an insulin drip, and laboratory testing is ordered. In the morning, the on-call physician hands off the patient to the day shift physician, who arrives an hour late due to an emergency at his nighttime moonlighting job. The handoff information includes the status of the patient and instructions to check electrolytes and calculate his anion gap. The physician performs inpatient rounds and then sees his usual clinic outpatients in the afternoon, but he neglects to check the patient's anion gap. The patient subsequently develops worsening acidosis requiring intubation for respiratory distress. Which of the following is the most likely cause of this adverse outcome?

A. Deficiency of knowledge (1%)
B. Excessive patient caseload (7%)
C. Inadequate patient handoff (15%)
D. Judgment error (7%)
E. Physician burnout (11%)
✓ F. Physician fatigue (57%)

Omitted
Correct answer
F

57%
Answered correctly

02 secs
Time Spent

01/11/2020
Last Updated

Explanation

Sleep deprivation is common among physicians and can have a profound effect on patient safety. Sleep science has demonstrated "dose-dependent" effects of sleep deprivation on physician cognitive performance and risk of medical errors. Impairments in cognitive performance and motor skills typically manifest after 17 hours of wakefulness and are comparable to those seen in an alcohol-intoxicated individual. Although the

Sleep deprivation is common among physicians and can have a profound effect on patient safety. Sleep science has demonstrated "dose-dependent" effects of sleep deprivation on physician cognitive performance and risk of medical errors. Impairments in cognitive performance and motor skills typically manifest after 17 hours of wakefulness and are comparable to those seen in an alcohol-intoxicated individual. Although the Accreditation Council for Graduate Medical Education has mandated limitations on resident work hours in response to patient safety concerns, extended work hours of attending physicians are unregulated. Physicians typically do a poor job of self-regulating their workload, often underestimate their cumulative sleep debt, and minimize its impact on their clinical skills. In this scenario, the physician has been working continuously for more than 24 hours; fatigue is the most likely contributor to his forgetting to check the patient's anion gap, which resulted in the adverse outcome.

(Choices A, B, and D) There is no evidence that the physician lacks knowledge, had an excessive patient caseload, or committed an error in judgment.

(Choice C) Inadequate patient handoffs carry a high risk of medical errors. Optimal patient handoffs should include a checklist of tasks and clinical status for each patient, as occurred in this case.

(Choice E) Physician burnout refers to a state of emotional exhaustion, cynicism, depersonalization, and decreased sense of personal accomplishment that can result in suboptimal patient care and medical errors. Although sleep deprivation may contribute to burnout, there is no evidence that this physician's error was secondary to burnout, which often involves errors resulting from lack of concern or callousness toward patients rather than forgetfulness.

Educational objective:
Sleep deprivation in physicians often causes cognitive impairment, resulting in medical errors. Although mandated resident work-hour limitations are in place, it is the responsibility of all physicians to self-regulate their workloads to promote patient safety.

References

- Sleep deprivation in resident physicians, work hour limitations, and related outcomes: a systematic review of the literature.
- Sleep science, schedules, and safety in hospitals: challenges and solutions for pediatric providers.
- Sleep deprivation, physician performance, and patient safety.

A 19-year-old Hispanic woman comes to the clinic due to nausea and abdominal pain. She struggles to describe the pain and frequently points to her lower abdomen. The patient shakes her head no when asked if she could be pregnant or is sexually active. When she is asked about her last menstrual period, she nods affirmatively and says "now." She is single and immigrated to the United States several months ago. Physical examination shows moderate abdominal tenderness with no rebound or guarding and vital signs are stable. The patient is discharged home with a diagnosis of food poisoning. Later that day, she is taken by ambulance to the emergency department after experiencing severe abdominal pain followed by loss of consciousness. A diagnosis of ruptured ectopic pregnancy is made. Which of the following interventions would most likely have prevented the delay in diagnosis?

A. Asking the patient whether she feels comfortable discussing sexual issues

B. Assessing the patient's cultural health beliefs

C. Assessing the patient's current social situation

D. Calling family members to obtain additional history

E. Determining whether the patient needs language assistance

Submit

A 19-year-old Hispanic woman comes to the clinic due to nausea and abdominal pain. She struggles to describe the pain and frequently points to her lower abdomen. The patient shakes her head no when asked if she could be pregnant or is sexually active. When she is asked about her last menstrual period, she nods affirmatively and says "now." She is single and immigrated to the United States several months ago. Physical examination shows moderate abdominal tenderness with no rebound or guarding and vital signs are stable. The patient is discharged home with a diagnosis of food poisoning. Later that day, she is taken by ambulance to the emergency department after experiencing severe abdominal pain followed by loss of consciousness. A diagnosis of ruptured ectopic pregnancy is made. Which of the following interventions would most likely have prevented the delay in diagnosis?

A. Asking the patient whether she feels comfortable discussing sexual issues (9%)

B. Assessing the patient's cultural health beliefs (0%)

C. Assessing the patient's current social situation (1%)

D. Calling family members to obtain additional history (0%)

✓ E. Determining whether the patient needs language assistance (87%)

Omitted
Correct answer
E

87%
Answered correctly

02 secs
Time Spent

01/28/2020
Last Updated

Explanation

Nearly 20% of the United States population speaks languages other than English at home. It is therefore essential that physicians assess language proficiency when delivering care to immigrant populations. This patient's immigrant background and difficulty describing her pain should raise concern about limited English proficiency (LEP) and the need for a qualified medical interpreter. In the United States, patients with LEP

Explanation

Nearly 20% of the United States population speaks languages other than English at home. It is therefore essential that physicians assess language proficiency when delivering care to immigrant populations. This patient's immigrant background and difficulty describing her pain should raise concern about limited English proficiency (LEP) and the need for a qualified medical interpreter. In the United States, patients with LEP experience a variety of health care disparities, including reduced clinical encounter time, substandard medical treatment, and higher rates of adverse events and preventable medical errors. The safety of LEP patients is particularly jeopardized in high-risk clinical situations such as emergency department care, surgical care, hospital discharge, and medical reconciliation.

A useful screening technique to assess language proficiency is to ask the patient, "How well do you speak English: Not at all, not well, well, or very well?" An interpreter is appropriate for patients who cannot respond or respond "not well." Recommended interventions to prevent adverse events include providing a qualified medical interpreter in high-risk clinical situations and providing translated educational materials. Using the "teach back" method (in which patients are asked to "teach" the physician what was just explained to them) can also serve to confirm understanding.

(Choices A, B, and C) Understanding cultural and social factors and sensitivity in obtaining a sexual history are important components of patient-centered care. However, addressing a potential language barrier takes precedence.

(Choice D) Contacting the patient's family is unlikely to be productive and may violate patient confidentiality.

Educational objective:
Physicians must be able to identify patients with limited English proficiency and ensure that professional interpreters are made available in high-risk clinical situations.

References

- Identification of limited English proficient patients in clinical care.
- Do professional interpreters improve clinical care for patients with limited English proficiency? A systematic review of the literature.
- Language proficiency and adverse events in US hospitals: a pilot study.

Behavioral science Miscellaneous (Multisystem) Medical errors

A 19-year-old man is admitted with delusions, hallucinations, and disorganized behavior. He is diagnosed with schizophrenia, and the physician writes an order to begin aripiprazole "2.0" mg. The patient mistakenly receives 20 mg aripiprazole instead of 2 mg. This order is overlooked during the pharmacy review process, and the nurse fails to question it before administering aripiprazole to the patient. Which of the following is the most effective intervention to reduce this type of error?

- A. Confirm dosage with the patient prior to administration
- B. Educate physicians to avoid use of trailing zeros
- C. Employ computerized systems to flag inappropriate medication orders
- D. Remind physicians to be careful with decimal point placement
- E. Require 2 nurses to check medication orders
- F. Require 2 pharmacists to check all orders

Submit

A 19-year-old man is admitted with delusions, hallucinations, and disorganized behavior. He is diagnosed with schizophrenia, and the physician writes an order to begin aripiprazole "2.0" mg. The patient mistakenly receives 20 mg aripiprazole instead of 2 mg. This order is overlooked during the pharmacy review process, and the nurse fails to question it before administering aripiprazole to the patient. Which of the following is the most effective intervention to reduce this type of error?

- A. Confirm dosage with the patient prior to administration (6%)
- ✓ B. Educate physicians to avoid use of trailing zeros (46%)
- C. Employ computerized systems to flag inappropriate medication orders (24%)
- D. Remind physicians to be careful with decimal point placement (2%)
- E. Require 2 nurses to check medication orders (9%)
- F. Require 2 pharmacists to check all orders (9%)

Omitted
Correct answer
B

46%
Answered correctly

0 secs
Time Spent

01/11/2020
Last Updated

Explanation

Illegible orders and transcribing errors are preventable causes of medication errors. In this case, the medication error could be due to an unclear decimal point or a transcription error. Although the increased use of computerized physician order entry systems with drop-down menus for drug, dose, route, and frequency has reduced the incidence of these errors, the systems are not universally available. Physicians must write or enter orders clearly and specifically avoid using trailing zeros to prevent errors in dosage. Studies show that educational interventions to reduce the use of certain abbreviations (eg, QD, µg) and avoid trailing zeros lead to a significant decrease in transcription errors.

Illegible orders and transcribing errors are preventable causes of medication errors. In this case, the medication error could be due to an unclear decimal point or a transcription error. Although the increased use of computerized physician order entry systems with drop-down menus for drug, dose, route, and frequency has reduced the incidence of these errors, the systems are not universally available. Physicians must write or enter orders clearly and specifically avoid using trailing zeros to prevent errors in dosage. Studies show that educational interventions to reduce the use of certain abbreviations (eg, QD, µg) and avoid trailing zeros lead to a significant decrease in transcription errors.

(Choice A) Confirming the dosage with the patient may be helpful. However, it is an inadequate double-check due to many patients being unaware of their medication dosage or in a mental state (due to a psychiatric or medical condition) that may prevent them from thinking clearly about it.

(Choice C) Because a particular medication may be available in different dosages, computerized checks with automated alerts may not consistently identify a higher dosage as an error. Computerized systems are helpful in eliminating illegible orders; identifying patients at high risk for an adverse event; and alerting physicians to medication allergies, drug interactions, and dosage limits.

(Choice D) Eliminating trailing zeros entirely is a better option than reminding physicians to be careful placing decimal points.

(Choices E and F) Hiring additional nursing and pharmacy staff to perform double-checks on each medication order would not be cost-effective and would not consistently detect handwritten notation errors, as individuals reviewing the orders may influence each other's opinion.

Educational objective:
Avoiding the use of unsafe abbreviations and trailing zeros in medication orders can help reduce the incidence of medication errors.

References

- Impact of prescriber's handwriting style and nurse's duty duration on the prevalence of transcription errors in public hospitals.
- Educational interventions to reduce use of unsafe abbreviations.
- Technology utilization to prevent medication errors.

Behavioral science	Miscellaneous (Multisystem)	Medical errors
Subject	System	Topic